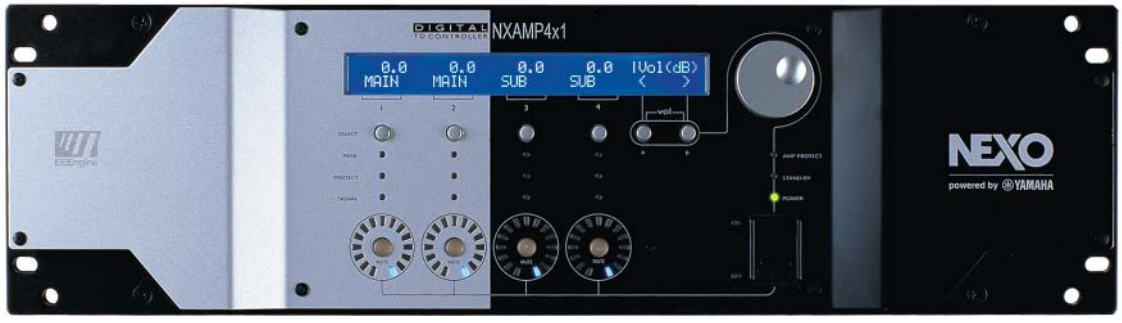
# POWERED TD CONTROLLER

# NXAMP4x1

## SERVICE MANUAL




### ■ CONTENTS（目次）

PANEL LAYOUT（パネルレイアウト）.....3
CIRCUIT BOARD LAYOUT（ユニットレイアウト）.....4
SERVICE PRECAUTIONS（サービス時の注意）.....5
OVERALL ASSEMBLY WIRING（総組立配線図）.....7
DISASSEMBLY PROCEDURES（分解手順）.....23
LSI PIN DESCRIPTION（LSI 端子機能表）.....32
IC BLOCK DIAGRAM（IC ブロック図）.....33
CIRCUIT BOARDS（シート基板図）.....39
TEST PROGRAM .....59
テストプログラム .....66
INSPECTIONS .....73
検査 .....78
UPDATING THE FIRMWARE .....83
ファームウェアのアップデート .....85
PARTS LIST
BLOCK DIAGRAM
IC & DIODE FIGURES
CIRCUIT DIAGRAM

PA 011946

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**WARNING:** This product contains chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

## IMPORTANT NOTICE FOR THE UNITED KINGDOM

### Connecting the Plug and Cord

**WARNING:** THIS APPARATUS MUST BE EARTHED
**IMPORTANT.** The wires in this mains lead are coloured in accordance with the following code:

| | |
|---|---|
| GREEN-AND-YELLOW: | EARTH |
| BLUE: | NEUTRAL |
| BROWN: | LIVE |

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured GREEN and YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or colored GREEN or colored GREEN and YELLOW.
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

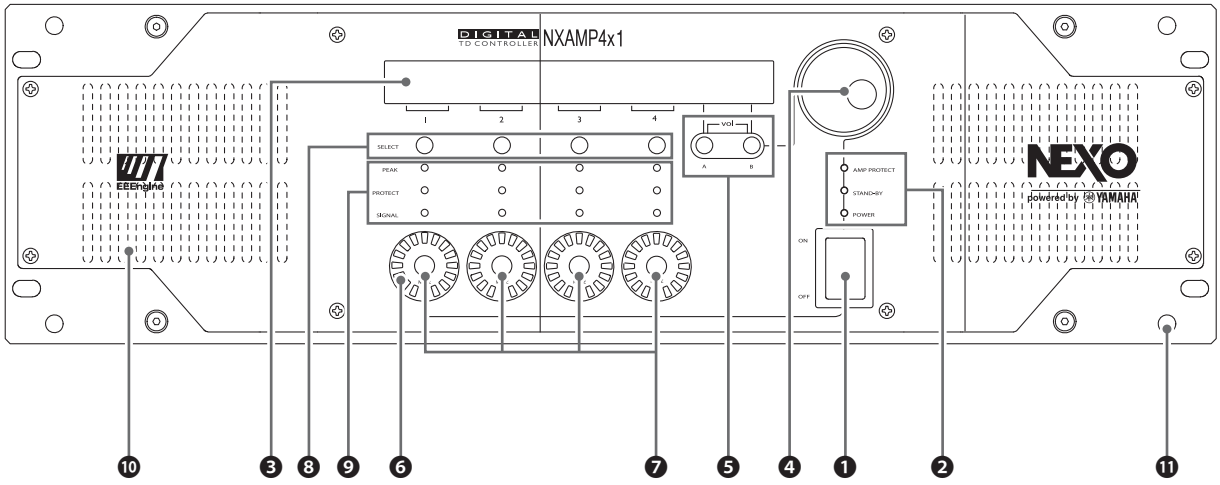
## ■ WARNING（注意）

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

⚠ 印の商品は、安全を維持するために重要な部品です。交換する場合は、安全のために必ず指定の部品をご使用ください。

# ■ PANEL LAYOUT（パネルレイアウト）

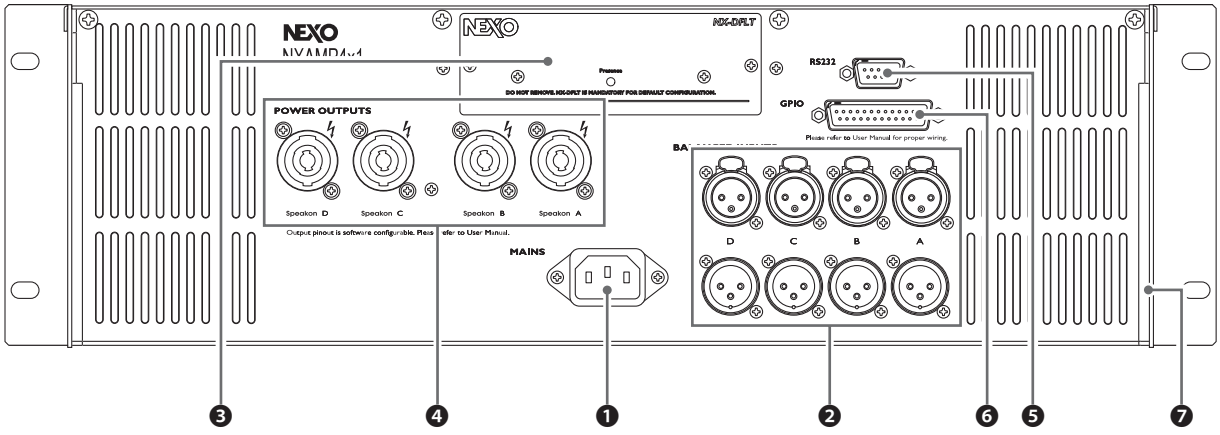
- **Front Panel（フロントパネル）**




❶ Power switch
❷ Amplifier indicators
❸ LCD display
❹ Encoder
❺ Navigation buttons (A & B)
❻ Volume indicators
❼ Mute buttons
❽ Select buttons
❾ Channel indicators
❿ Air intakes
⓫ Screw holes for handles

❶ 電源スイッチ
❷ アンプディスプレイ
❸ LCD ディスプレイ
❹ エンコーダー
❺ ナビゲーションボタン（A & B）
❻ ボリュームディスプレイ
❼ ミュートボタン
❽ セレクトボタン
❾ チャンネルディスプレイ
❿ 吸気口
⓫ ハンドル用ネジ穴

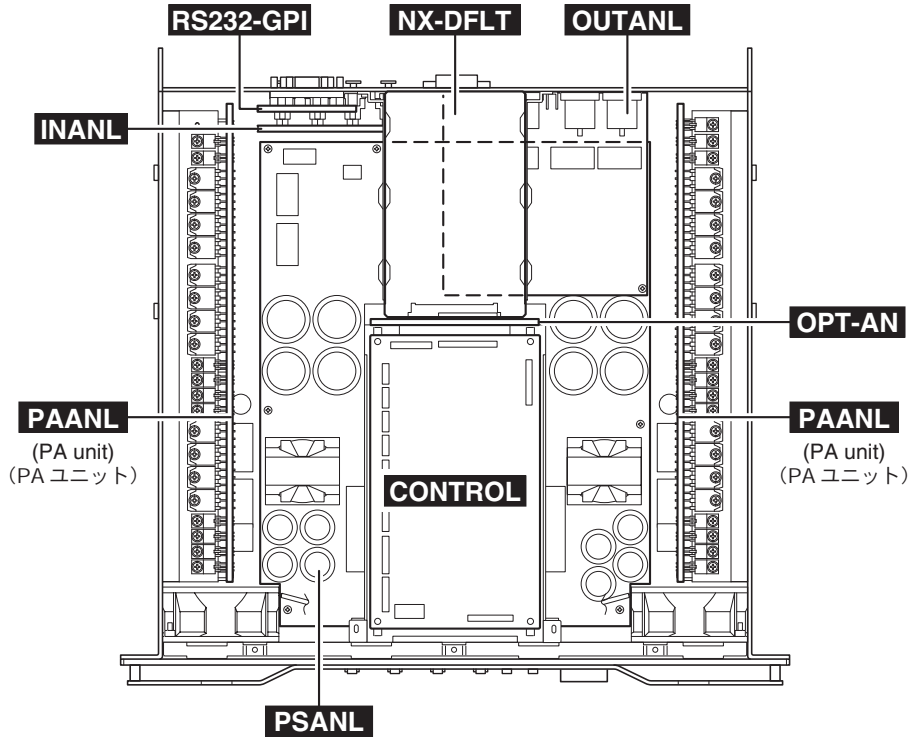
- **Rear Panel（リアパネル）**



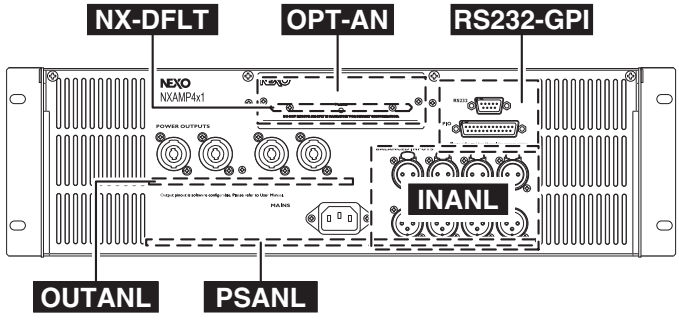

❶ Mains connectors
❷ Balanced audio inputs with link
❸ Expansion slot
❹ Power outputs
❺ RS-232 Firmware update port
❻ GPIO port
❼ Rear end mounting holes

❶ 電源端子
❷ バランスオーディオ入力（リンク付き）
❸ 拡張スロット
❹ パワー出力
❺ RS-232C ファームウェアアップデート用ポート
❻ GPIO ポート
❼ リアエンド取り付け穴

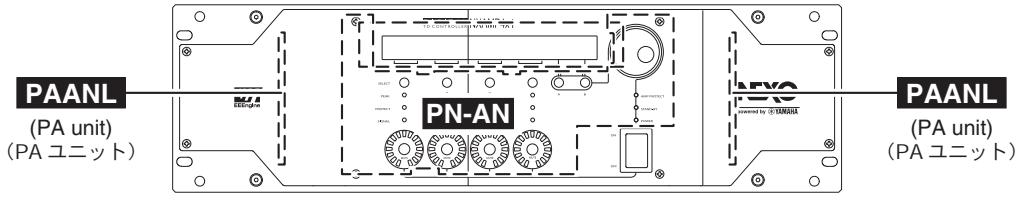
# ■ CIRCUIT BOARD LAYOUT（ユニットレイアウト）




Rear Panel（リアパネル）




Front Panel（フロントパネル）



# ■ SERVICE PRECAUTIONS（サービス時の注意）

## Safety measures

- Some component parts on the PSANL circuit board maintain a high voltage even when the power is switched off. For this reason to avoid an electrical shock, do not touch the upper metallic part of the following capacitors until the remaining voltage has discharged.

## 安全対策

・ PSANL シートの部品の一部には電源 OFF 状態でも高電圧が残ります。感電防止のため、残った電圧を放電するまで下記のコンデンサの上部の金属部分に触らないでください。

| Capacitors / コンデンサ | Discharging point / 放電箇所 |
|---|---|
| C316, C317, C322, C323 | ① D305: + pin <=> D305: - pin |
| C318, C319, C324, C325 | ② D306: + pin <=> D306: - pin |
| C344, C354 | ③ CN305 <=> CN316 |
| C345, C355 | ④ CN307 <=> CN316 |
| C347, C356 | ⑤ CN308 <=> CN309 |
| C348, C357 | ⑥ CN310 <=> CN309 |
| C205 | ⑦ R213: lead <=> C201 |

**[Discharging Method]**

Before starting the service work, connect discharging resistors (220 Ω 10W) to the terminals indicated in the figure below to discharge electricity. (7 points)
The required discharging time is about 10 seconds. Check that the DC voltage between the terminals measures close to 0 (zero) volts using a multi-meter to make sure that the discharge is completed.

**Note:**

Do not touch the IC201 and its heat sink before discharging the C205.

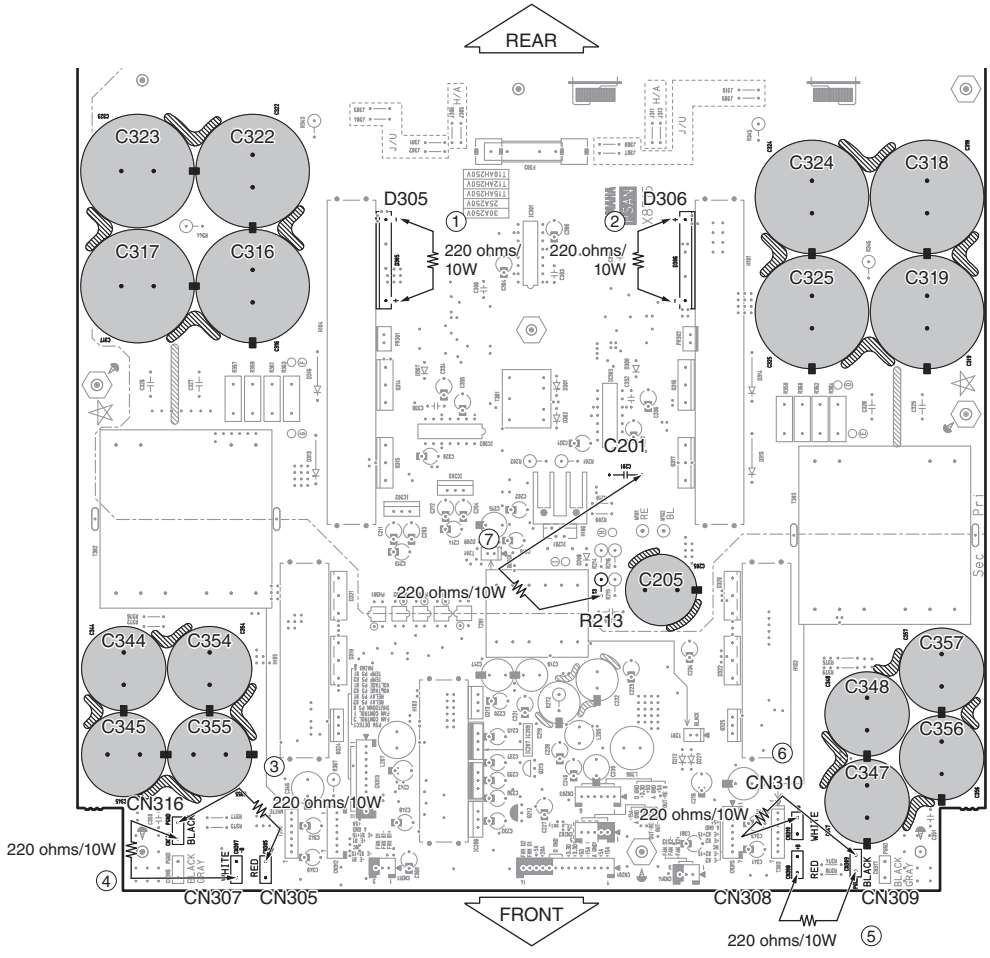
**[放電方法]**

修理作業を始める前に、放電抵抗（220 Ω、10 W）を下図に示す放電用の端子間に接続します。（7 箇所）
放電に必要な時間は約 10 秒です。放電完了確認のため、端子間電圧がほぼ 0（ゼロ）V であることをテスターでチェックします。

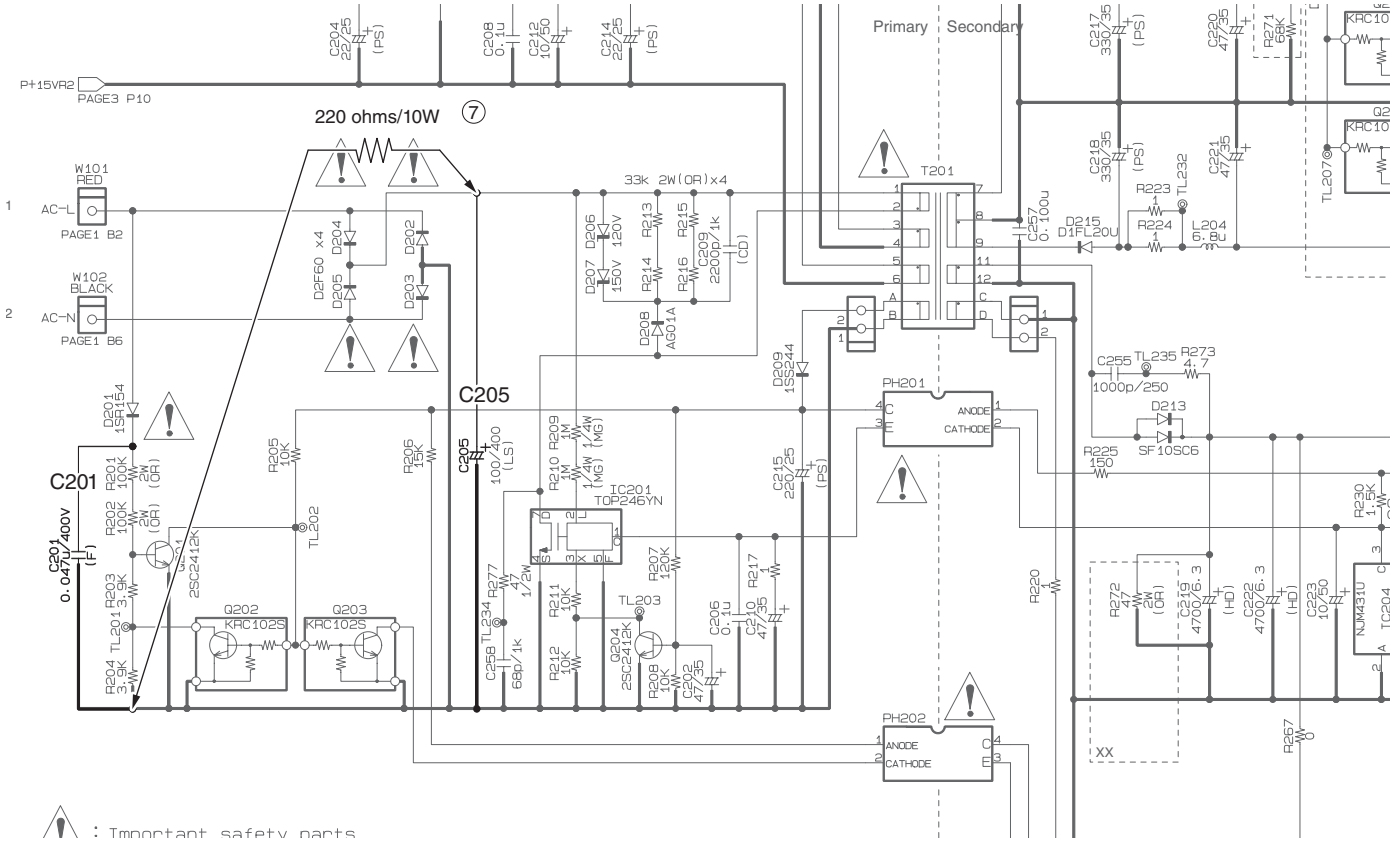
**注意：**

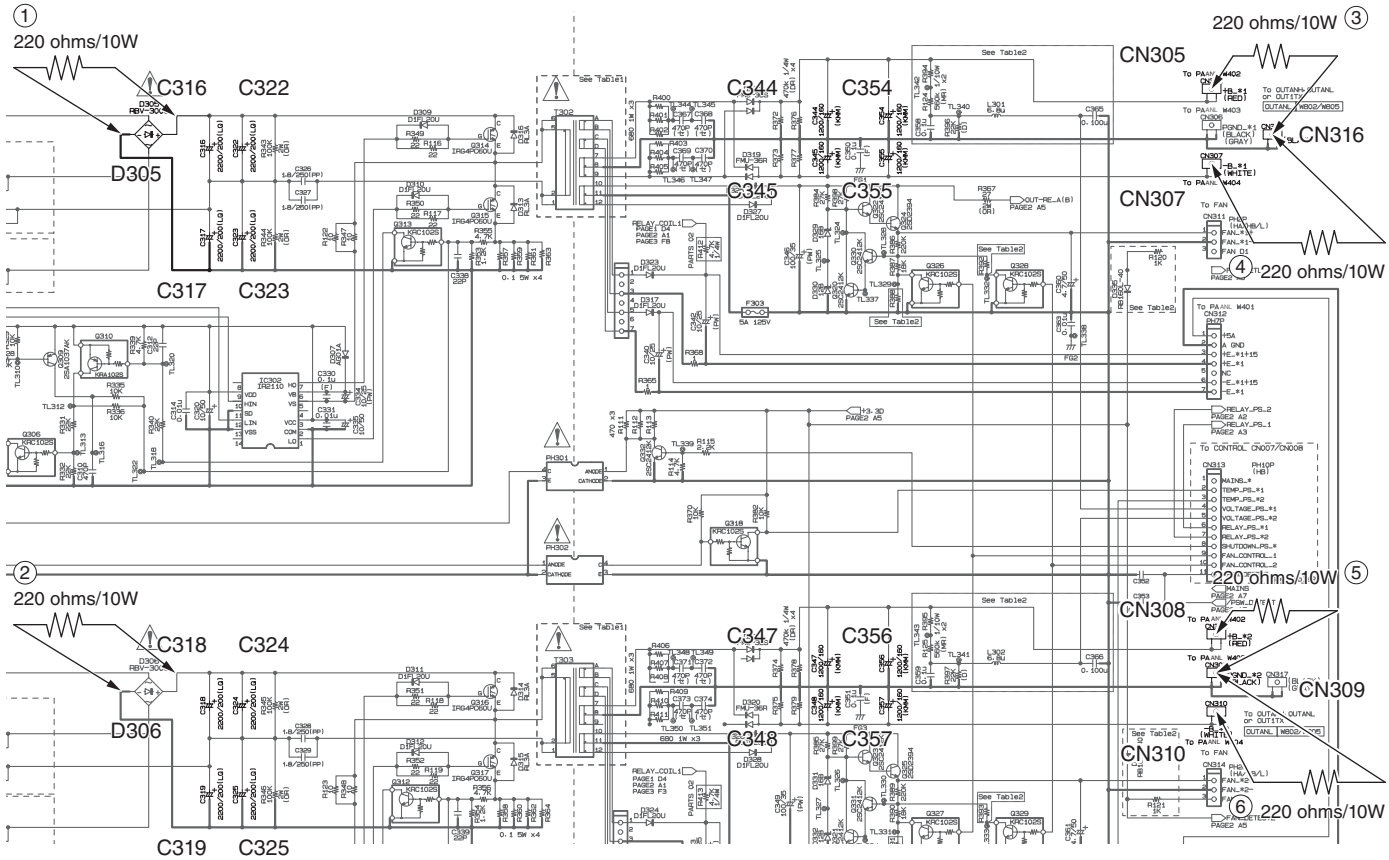
C205 の放電完了まで IC201 とそれを固定しているヒートシンクには触らないでください。

**PSANL circuit board**



## PSANL circuit diagram



# ■ OVERALL ASSEMBLY WIRING（総組立配線図）

This product has various cables (wires and connector assemblies) inside. To prevent touching component to the cables and/or connection mistake, perform the cable connection and fixing cables according to the following instructions referring the wiring diagram, P3 of the circuit diagram.

**Notice:** Since the following pictures are taken of the preproduction product, they may differ from the commodity products in detail. However, the wiring and so on is not so differ between them. So, refer only to wiring and so on.

本製品内部には色々な種類のケーブル（線材、束線）があります。ケーブルの部品への接触やケーブルの接続ミスを防止するために、回路図 3 ページの基板配線図を参照の上で下記の指示にしたがってケーブルの接続と固定を行ってください。

**注意：** 掲載した写真は量産試作品を撮影したものですので生産品とは細かい部分で異なりますが、配線周辺について違いはありません。配線作業用に限定して参考にしてください。

## 1. Wiring of the PN-AN circuit board

1) Process the flat cable (WK02100). (Fig. 1)
2) Connect the flat cable (WK02100) to the PN-AN circuit board. (Fig. 2)
3) Install the PN-AN circuit board to the front panel. (Fig. 3)

## 1. PN-AN シートの配線

1） フラットケーブル（WK02100）を加工します。（図 1）
2） フラットケーブル（WK02100）を PN-AN シートへ接続します。（図 2）
3） PN-AN シートをフロントパネルへ取り付けます。（図 3）

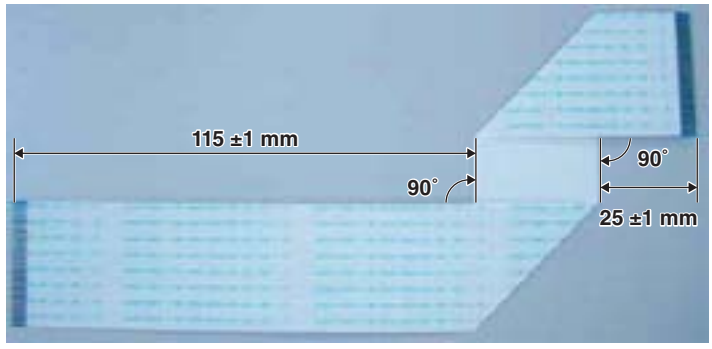



**Fig. 1（図 1）**

**Fig. 3（図 3）**

**Fig. 2（図 2）**

## 2. Wiring of the power switch

1) Install the power switch to the front panel with its terminals set downward. (Fig. 4, 5)

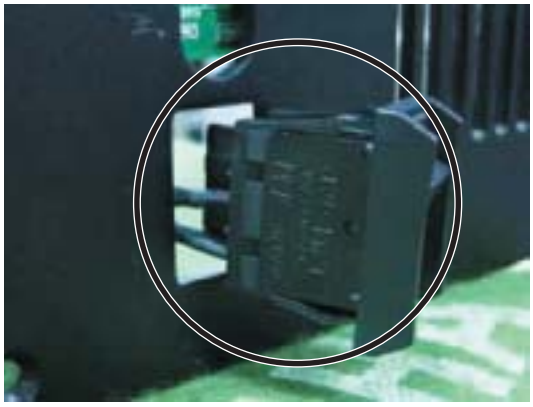


**Fig. 4（図 4）**

2) Confirm that the power switch is set to the off position as shown in the figure. (Fig. 6)
3) Twist the wires of the power switch assembly more than three times.
4) Connect the power switch assembly to the connector (CN103) of the PSANL circuit board . (Fig. 7)

**Fig. 6（図 6）**

## 2. 電源スイッチの配線

1） 端子の位置を下側にセットして、電源スイッチをフロントパネルへ取り付けます。（図 4、5）

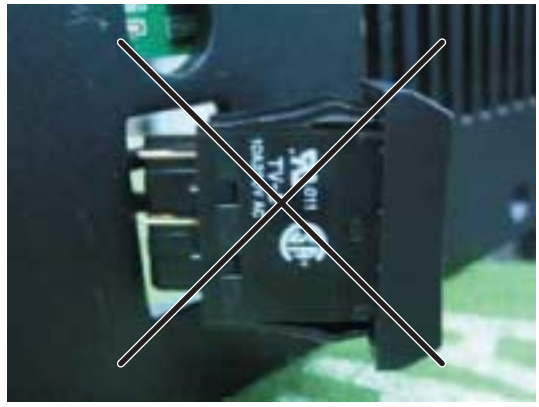


**Fig. 5（図 5）**

2） 電源スイッチが図のように OFF ポジションにセットされていることを確認します。（図 6）
3） 電源スイッチの線材を 3 回以上捻ります。
4） 電源スイッチの線材を PSANL シートのコネクター（CN103）へ接続します。（図 7）

**Fig. 7（図 7）**

## 3. Wiring of the FAN

Connect the wire of the FAN to each connector. (Fig. 8)

## 3. ファンの配線

ファンの線材を各コネクターへ接続します。（図 8）

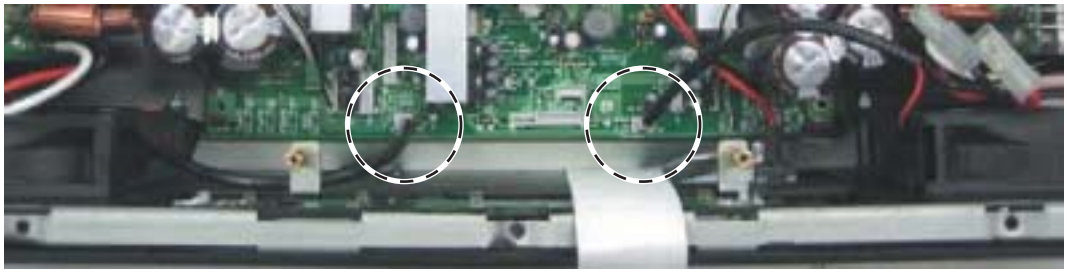


**Fig. 8（図 8）**

## 4. Attaching of the support cushion

Attach the support cushion (WN15950) at the specified area on the pattern side of the CONTROL circuit board. (Fig. 9)

**Note:** Be sure to remove the oil and the dust, etc. on the attaching surface before attaching the support cushion.

## 4. サポートクッションの取り付け

CONTROL シートパターン面の所定の位置にサポートクッション（WN15950）を取り付けます。（図 9）

**注意：** サポートクッションを取り付ける前に、取り付け面の油、埃などはきれいに取り除いてください。

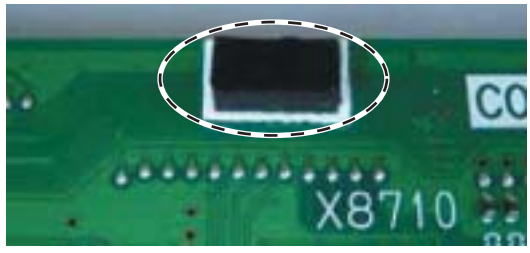



**Fig. 9（図 9）**

## 5. Wiring of the AC-INLET

a) Set a cord holder before installing the PSANL circuit board to the enclosure. (Fig. 10)

b) Set a ferrite-core at the specified area on the PSANL circuit board, and fasten the ferrite-core with the cord holder. (Fig. 11)

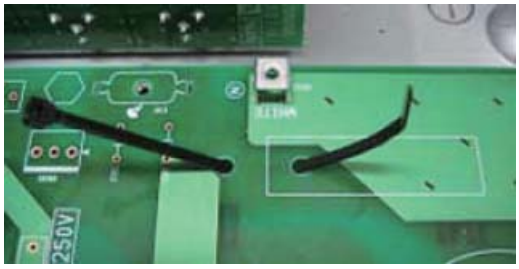


**Fig. 10（図 10）**

c) Pass the live and neutral wires of the AC-INLET through the ferrite core's hole twice and wind them to the ferrite core.
Screw an each screw terminal to the specified terminal. (Fig. 12, 13)
Fasten the GND wire with a cord holder. (Fig. 12, 13)
Screwing torque: GND LINE 1.8N • m /
L, N LINE 0.78 • m

**U/J destination（U ／ J 仕向）**

**Fig. 12（図 12）**

## 5. AC インレットの配線

a） PSANL シートを筐体へ取り付ける前に、インシュロックタイをセットします。（図 10）

b） PSANL シートの所定の位置にフェライトコアをセットし、インシュロックタイで固定します。（図 11）

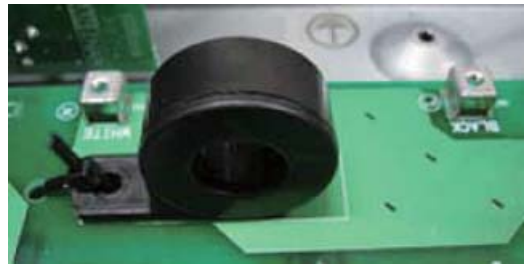


**Fig. 11（図 11）**

c） AC インレットの L、N の線をフェライトコアの穴に 2 回通して、フェライトコアに巻きつけます。
各端子を図のように固定します。（図 12、13）
GND 線をインシュロックタイで図のように固定します。（図 12、13）
ネジ締め付けトルク： GND LINE 1.8 N・m ／
L、N LINE 0.78・m

**CHN destination（CHN 仕向）**

**Fig. 13（図 13）**

d, e) Fix the wires to the terminal with the screws, and refer to the fig. 14 and fig. 15 for the direction of each terminal. (Fig. 16, 17)

d、e）端子をネジで固定します。このとき端子の向きは図に従ってください。（図 14、15）

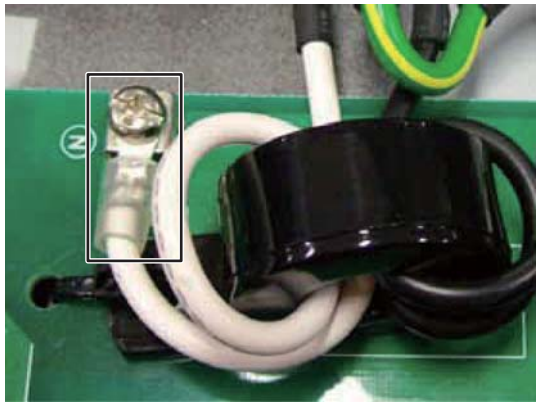


Fig. 14（図 14）

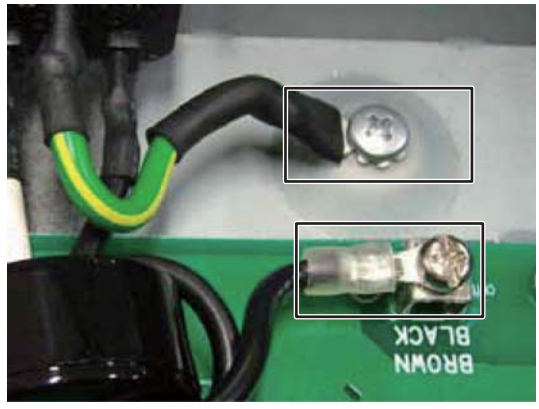



Fig. 15（図 15）

f) This black tube is added by design change. Add the black tube when it is not installed. (Correction object: All numbers) (Fig. 16, 17)

f） このスミチューブは設計変更による追加品です。装着されていない場合はスミチューブを追加してください。（修正対象：全数）（図 16、17）

**U/J destination（U ／ J 仕向）**

Fig. 16（図 16）

**CHN destination（CHN 仕向）**

Fig. 17（図 17）

## 6. Wiring of the PA unit

Connect the wires to the connectors (CN401, CN403). (Fig. 18, 19)

## 6. PA ユニットの配線

下図のようにコネクター（CN401、CN403）へ線材を接続します。（図 18、19）

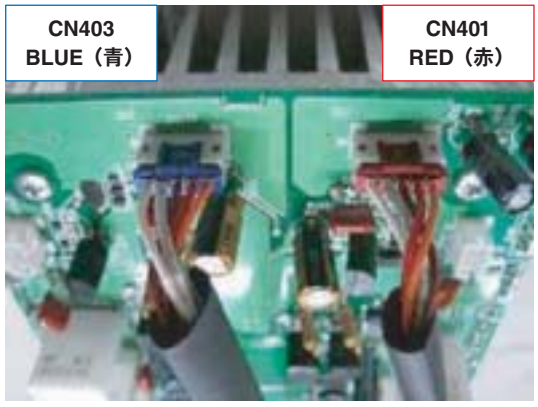



**Fig. 18（図 18）**

**NOTE:** The followings are wires to be connected.
CN401: WK02080
CN403: WK90770
Install this PA unit on the left side of enclosure.
Hereafter, this unit is called PA unit of CH1, CH2.

**注意：** 下記の線材を接続します。
CN401：WK02080
CN403：WK90770
この PA ユニットを筐体の左側へ取り付けます。
これ以後、このユニットを CH1、CH2 の PA ユニットと呼びます。

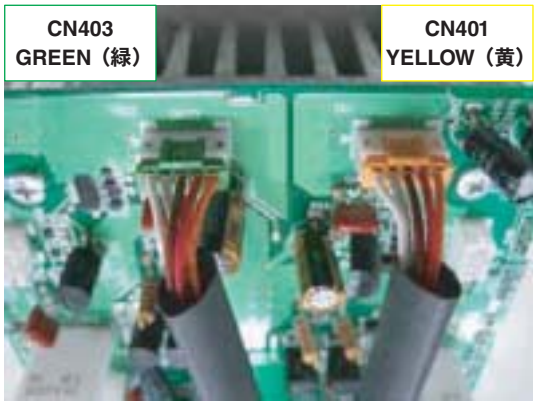



**Fig. 19（図 19）**

**NOTE:** The followings are wires to be connected.
CN401: WK90790
CN403: WK17110
Install this PA unit on the right side of enclosure.
Hereafter, this unit is called PA unit of CH3, CH4.

**注意：** 下記の線材を接続します。
CN401：WK90790
CN403：WK17110
この PA ユニットを筐体の右側へ取り付けます。
これ以後、このユニットを CH3、CH4 の PA ユニットと呼びます。

* The following figure describes a layout drawing of the PA units seen from the front panel. (Fig. 20)

※ 次の図は、フロントパネル側から見た PA ユニットのレイアウト図です。（図 20）

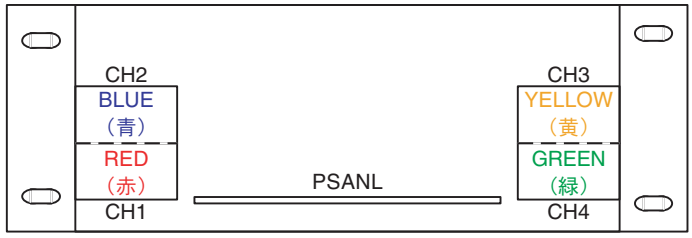



**Fig. 20（図 20）**

## 7. Wiring of the flat cable and fastening wires

Connect the following wires at first.
CN313: WK68760
CN201: WK68770

a) Install the RS232-GPI circuit board on the enclosure after connecting the wire (WM15830) to it.

b) Connect the wires (WK16830, WN52530) from each PA unit to the FASTON terminals of the OUTANL circuit board.
PA unit (CH1, CH2):
WN52530 (ORANGE) –> CN805
WK16830 (YELLOW) –> CN806
PA unit (CH3, CH4):
WN52530 (ORANGE) –> CN807
WK16830 (YELLOW) –> CN808
Then fold the wires (WK16830, WF52530) at the center of them, and fasten them with a cord holder. (Fig. 21)

c) Connect the wires (WK16820 x 2) to the connectors (CN306, CN317) of the PSANL circuit board.
Connect the wire (WK14200) to the connector (CN202) of the PSANL circuit board.
Fasten these wires with a cord holder at the position as shown in the figure. (Fig. 21)

## 7. フラットケーブルの配線と線材の固定

初めに下記の線材を接続します。
CN313：WK68760
CN201：：WK68770

a） RS232-GPI シートに線材（WM15830）を接続した後、筐体に RS232-GPI シートを取り付けます。

b） 各 PA ユニット（CH1 ～ CH4）の線材（WK16830、WN52530）を、OUTANL シートのファストン端子へ接続します。
PA ユニット（CH1、CH2）：
WN52530（橙色）–> CN805
WK16830（黄色）–> CN806
PA ユニット（CH3、CH4）：
WN52530（橙色）–>CN807
WK16830（黄色）–>CN808
その後、図のように線材（WK16830、WN52530）を中央で折りたたんで、インシュロックタイで固定します。（図 21）

c） 線材（WK16820 x 2）を PSANL シートのコネクター（CN306、CN317）へ接続します。
線材（WK14200）を PSANL シートのコネクター（CN202）へ接続します。
これらの線材をインシュロックタイで図に示す位置で固定します。（図 21）

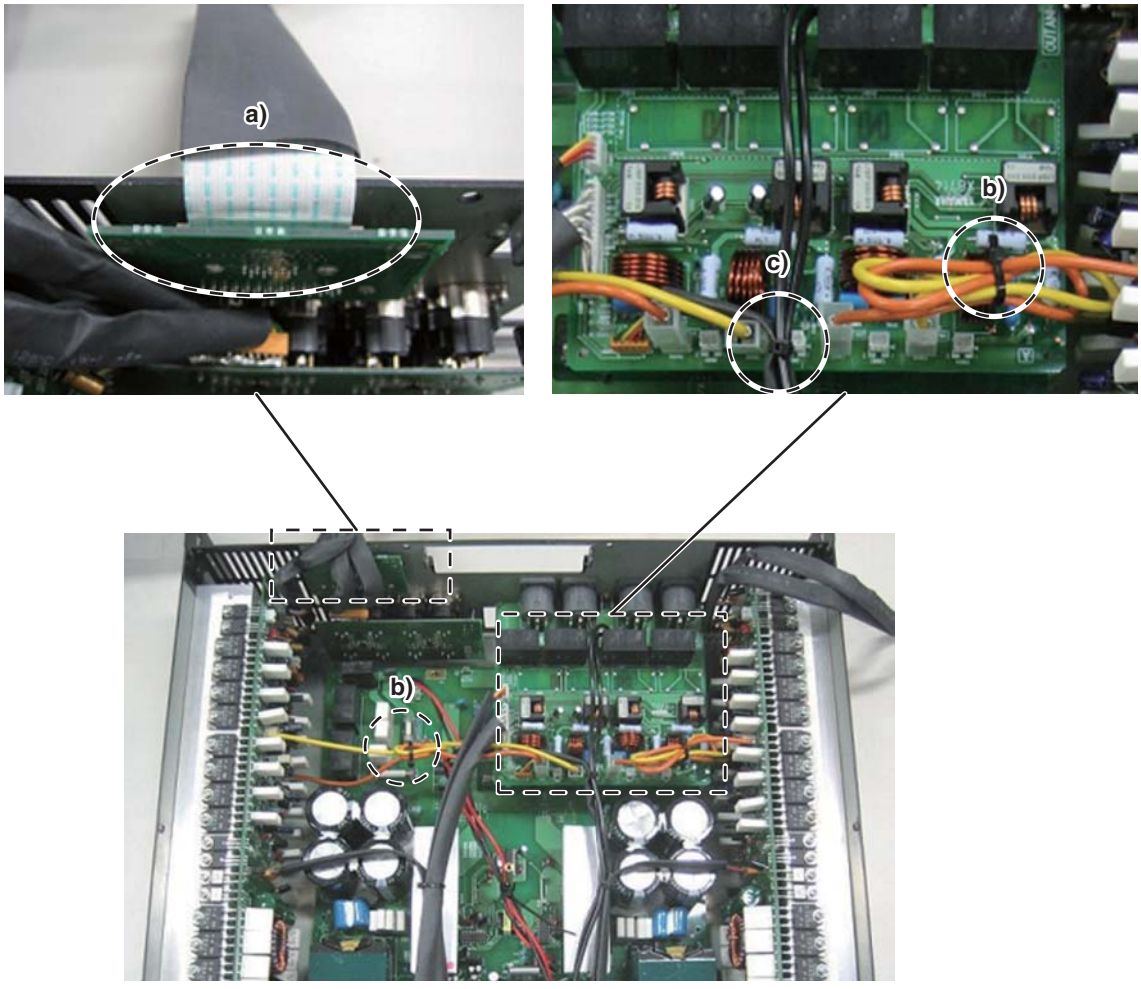



Fig. 21（図 21）

d) Connect the wire (WK14210) of PA unit (CH3, CH4) to the connector (CN315) of the PSANL circuit board.
Fasten the wire (WK14210) and the wires (WK16820 x 2, WK14200) with a cord holder at the position where the wire (WK14210) is vertically pulled from PA unit. Before fastening, pull the wires (WK16820 x 2, WK14200) toward the front panel side in advance. (Fig. 22)

e) Connect the wire (WK14210) of PA unit (CH1, CH2) to the connector (CN312) of the PSANL circuit board.
Fasten the wire (WK14210) and the wire (WK02090) with a cord holder at the position where the wire (WK14210) is vertically pulled from PA unit. Before fastening, pull the wire (WK02090) toward the front panel side in advance. (Fig. 22)

f) Twist the wires (white, red and black) of PA unit more than two times, and connect them to the FASTON terminals according to the wire color displayed on the PSANL circuit board. (Fig. 22)
Then bend these wires, and fasten them with a cord holder. (Fig. 23)

d） PA ユニット（CH3、CH4）の線材（WK14210）を PSANL シートのコネクター（CN315）へ接続します。線材（WK14210）を PA ユニットから垂直に引っ張った所で、線材（WK14210）、（WK16820 x 2、WK14200）をインシュロックタイで固定します。このとき、線材（WK16820 x 2、WK14200）をあらかじめフロント側へ引っ張っておきます。（図 22）

e） PA ユニット（CH1、CH2）の線材（WK14210）を PSANL シートのコネクター（CN312）へ接続します。線材（WK14210）を PA ユニットから垂直に引っ張った所で、線材（WK14210）、（WK02090）をインシュロックタイで固定します。このとき、線材（WK02090）をあらかじめフロント側へ引っ張っておきます。（図 22）

f） PA ユニットの線材（白、赤、黒）を 2 回以上捻った後、PSANL シートに表示された線材の色に従ってファストン端子へ接続します。（図 22）
線材を折り曲げた後インシュロックタイで固定します。（図 23）

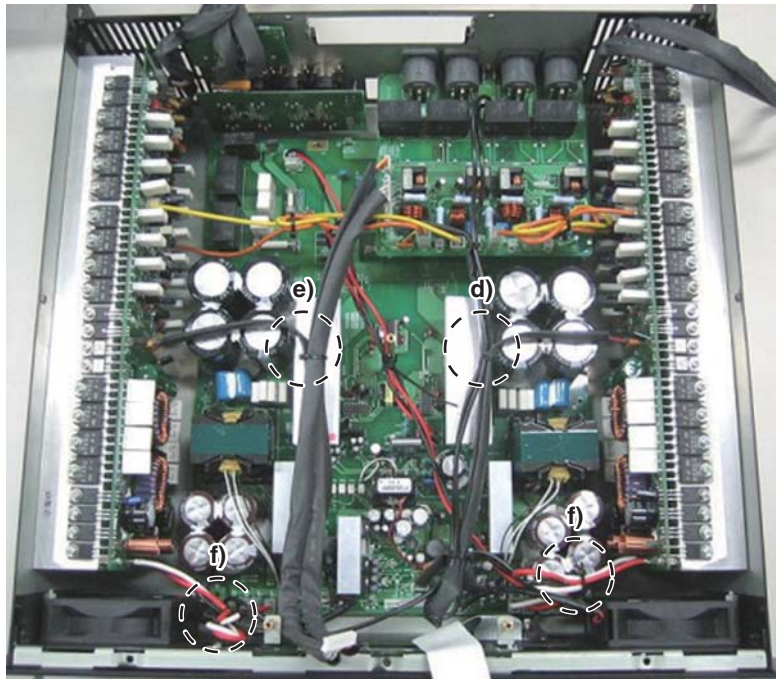



**Fig. 22（図 22）**

**Fig. 23（図 23）**

g) Fasten these wires (WK17900, WK17910 and WK94710) with a cord holder to the hexagonal spacer. (Fig. 24)

h) Bend the wire (WK14200) and wire (WK16820) connected to the connector (CN317), and fasten the wires (WK14210, WK16820 x 2 and WK14200) with a cord holder. (Fig. 24)

**Note:** When connecting the connector assembly to the CONTROL circuit board, confirm that the connector housing pin number of the connector assembly is the same as the connector pin number of the circuit board.

g） 線材（WK17900、WK17910、WK94710）をインシュロックタイで六角スペーサーへ固定します。（図 24）

h） 線材（WK14200）、コネクター（CN317）につながる線材（WK16820）を折り曲げて、（WK14210、WK16820 x 2、WK14200）をまとめてインシュロックタイで固定します。（図 24）

**注意：** CONTROL シートに束線を接続するとき、線材側のコネクターハウジングのピン数が CONTROL シート側のコネクターのピン数と同じであることを確認してください。

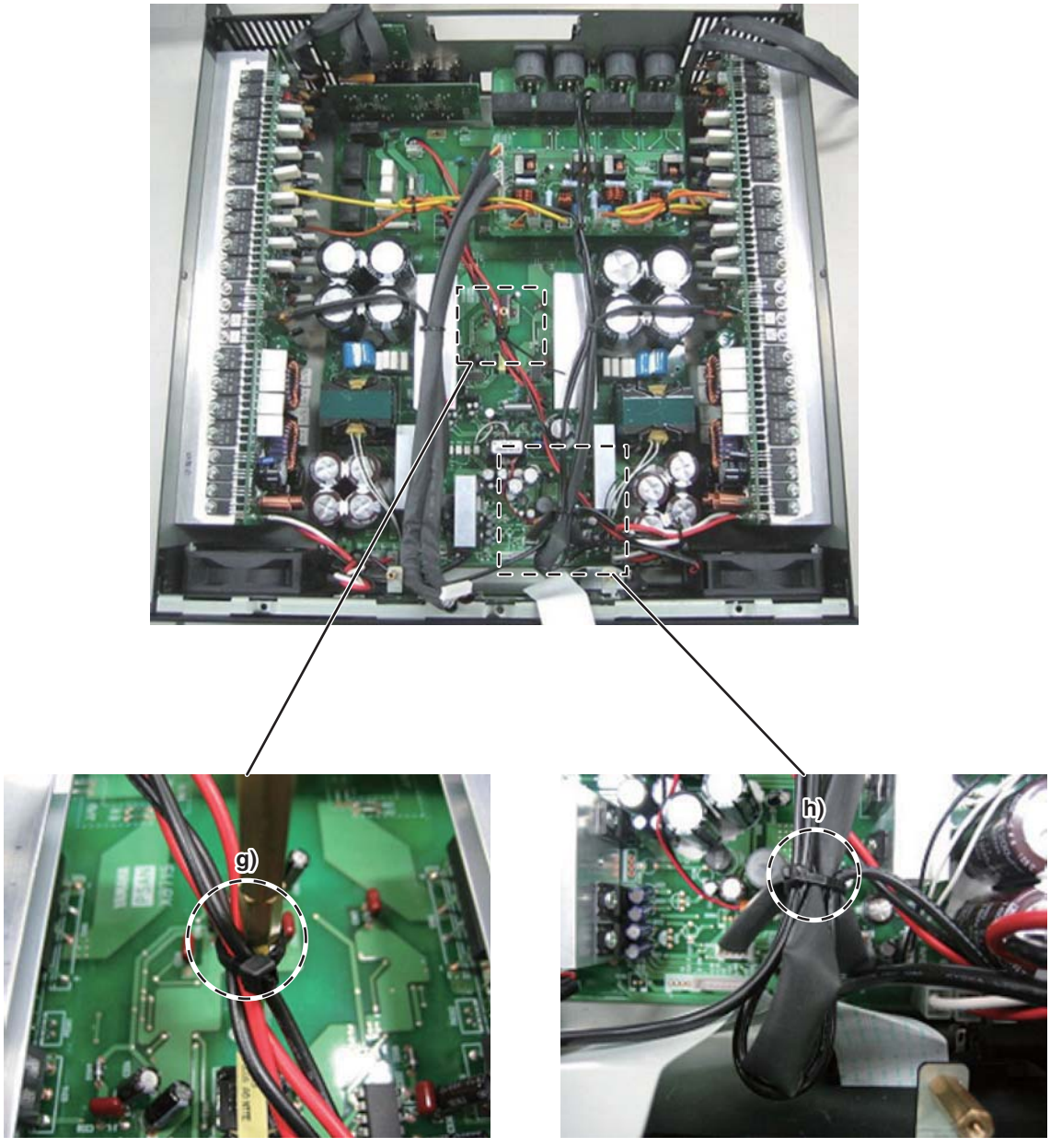



**Fig. 24（図 24）**

i) Fasten the wires (WK02080, WK90770) with a cord holder to the hole of the RS232-GPI circuit board. (Fig. 25)

j) Fasten the wires (WK02080, WK90770 and WK02070) with a cord holder to the hole of the enclosure. (Fig. 25, 26)
Fasten the wires (WK90790, WK17110) with a cord holder to the hole of the enclosure. (Fig. 25, 26)

i） 線材（WK02080、WK90770）をインシュロックタイで RS232-GPI シートの穴へ固定します。（図 25）

j） 線材（WK02080、WK90770、WK02070）をインシュロックタイで筐体の穴へ固定します。（図 25、26）
線材（WK90790、WK17110）をインシュロックタイで筐体の穴へ固定します。（図 25、26）

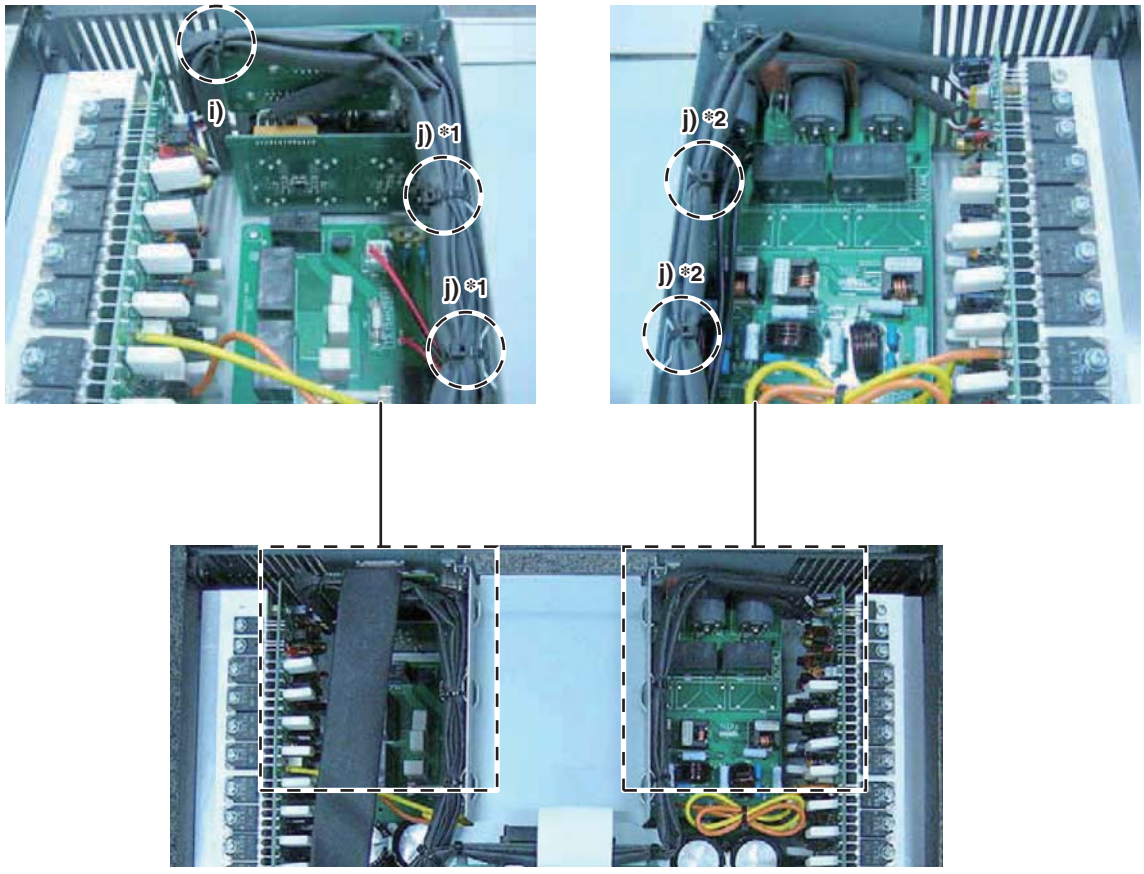



**Fig. 25（図 25）**

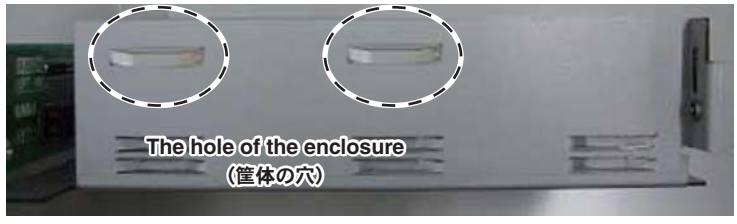



**Fig. 26（図 26）**

k) Fasten the wires (WK90790, WK17110) with a cord holder to the hole of the OPT-AN circuit board. Then connect the flat cable (WK02120). (Fig. 27)
l) Fasten the wires (WK02080, WK90770, WK90790, WK17110 and WK02070) with a cord holder at the position close to the OPT-AN circuit board. (Fig. 27)
m) Bend the wire (WK02090), and fasten the wires (WK02090, WK68760 and WK68770) with a cord holder. (Fig. 27)
n) Bend the flat cable as shown in the figure. (Fig. 27)
o) Bend the flat cable to prevent it from touching the top cover. (Fig. 28, 29)

k） 線材（WK90790、WK17110）をインシュロックタイで OPT-AN シートの穴へ固定します。（図 27）
その後、フラットケーブル（WK02120）を接続します。
l） OPT-AN シートの横で線材（WK02080、WK90770、WK90790、WK17110、WK02070）をインシュロックタイで固定します。（図 27）
m） 線材（WK02090）を折り曲げて、線材（WK02090、WK68760、WK68770）をインシュロックタイで固定します。（図 27）
n） フラットケーブルを図のように折り曲げます。（図 27）
0） 天板との接触を避けるためにフラットケーブルを折り曲げます。（図 28、29）

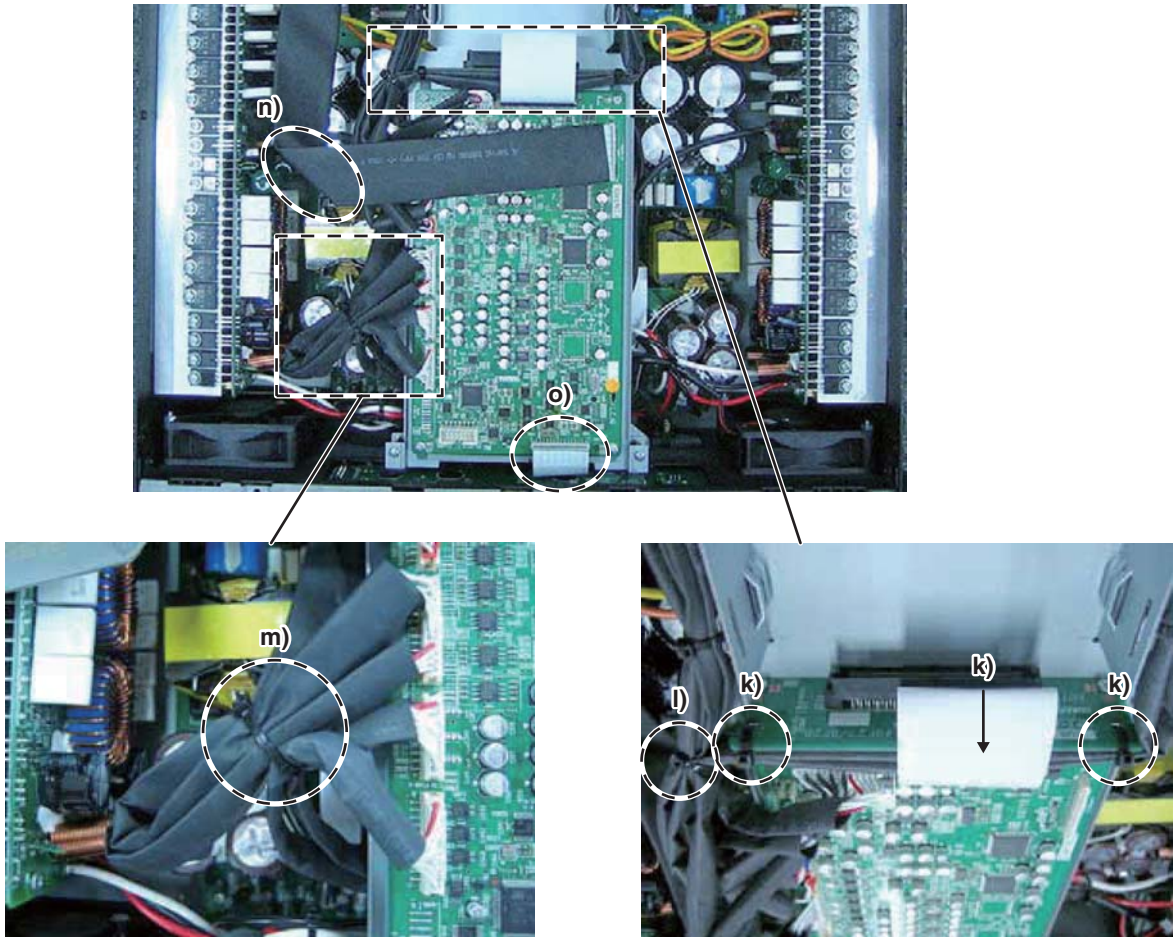



**Fig. 27（図 27）**

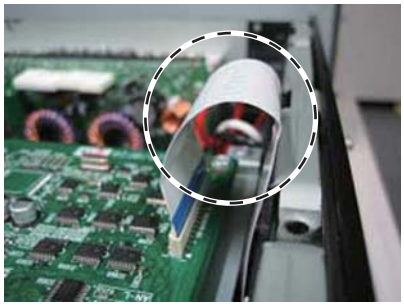


**Fig. 28（図 28）**

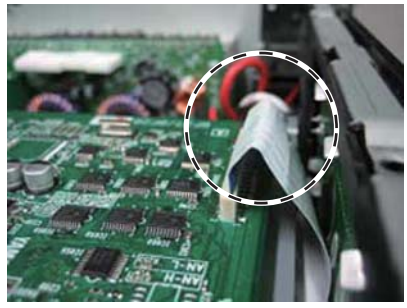


**Fig. 29（図 29）**

## 8. Color of the connectors connected to the connector CN012–CN015

Connect the connector assembly from the PA unit to the CONTROL circuit board as shown in the figure below. (Fig. 30)

## 8. CN012 ～ CN015 へ接続するコネクターの色

PA ユニットからの束線を下図のように CONTROL シートへ接続します。（図 30）

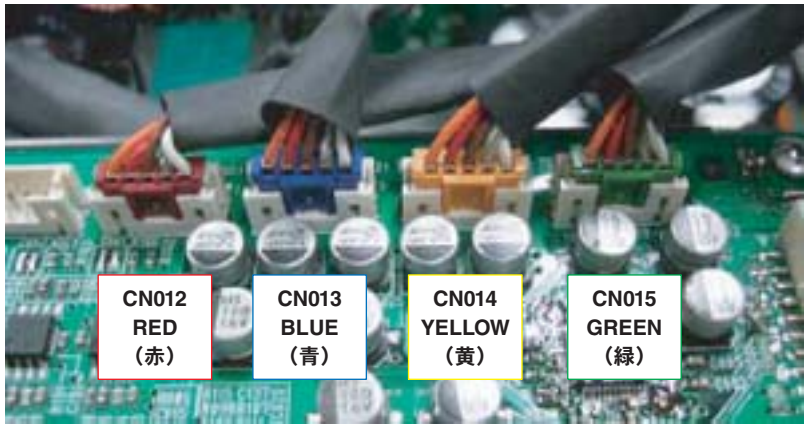



**Fig. 30（図 30）**

## 9. Change of the destination

Set the knob position of the switch SW001 on the CONTROL circuit board as shown in the figure below. (Fig. 31, 32)

## 9. 仕向け先の切り替え

CONTROL シートのスイッチ SW001 を下図のように切り替えます。（図 31、32）

**U/J destination（U ／ J 仕向）**

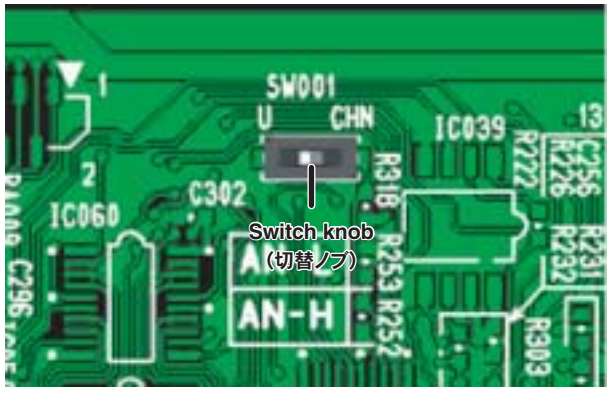



**Fig. 31（図 31）**

**CHN destination（CHN 仕向）**

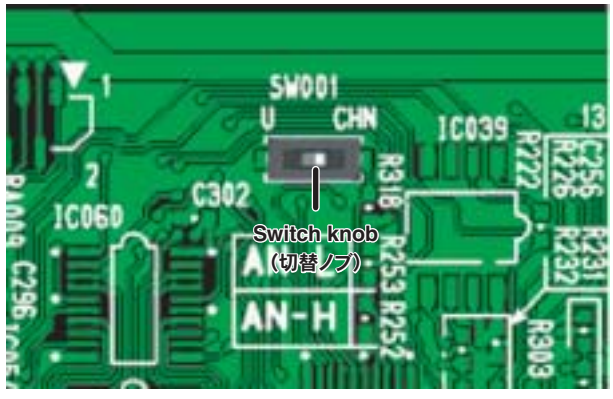



**Fig. 32（図 32）**

## 10. Insulation distance between wire (WK17110) and primary side capacitor

Perform wiring of the connector assembly (WK17110) with care so that its uncovered portion with the SUMI tube does not touch the capacitor (C316) on primary side of the PSANL circuit board. (Fig. 33, 34)

Fig. 33（図 33）

## 10. 束線 WK17110 と 1 次側ケミコンの絶縁距離

束線（WK17110）を配線するとき、スミチューブに覆われていない部分が PSANL シートの 1 次側にあるコンデンサ（C316）に接触しないように注意してください。（図 33、34）

Fig. 34（図 34）

## 11. Insulation distance between WK14210 and primary side capacitor

Perform wiring the connector assembly (WK14210) with care so that its uncovered portion with the SUMI tube does not touch the capacitors (C317 and C319) on primary side of the PSANL circuit board. (Fig. 35, 36)

## 11. 束線 WK14210 と 1 次側ケミコンの絶縁距離

束線（WK14210）を配線するとき、スミチューブに覆われていない部分が PSANL シートの 1 次側コンデンサ（C317、C319）に接触しないように注意して配線してください。（図 35、36）

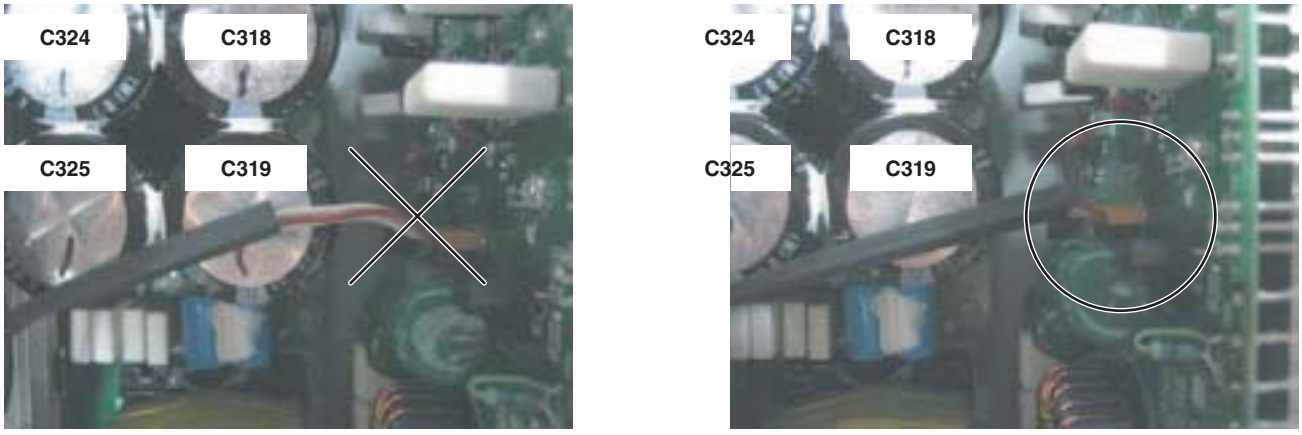



Fig. 35（図 35）

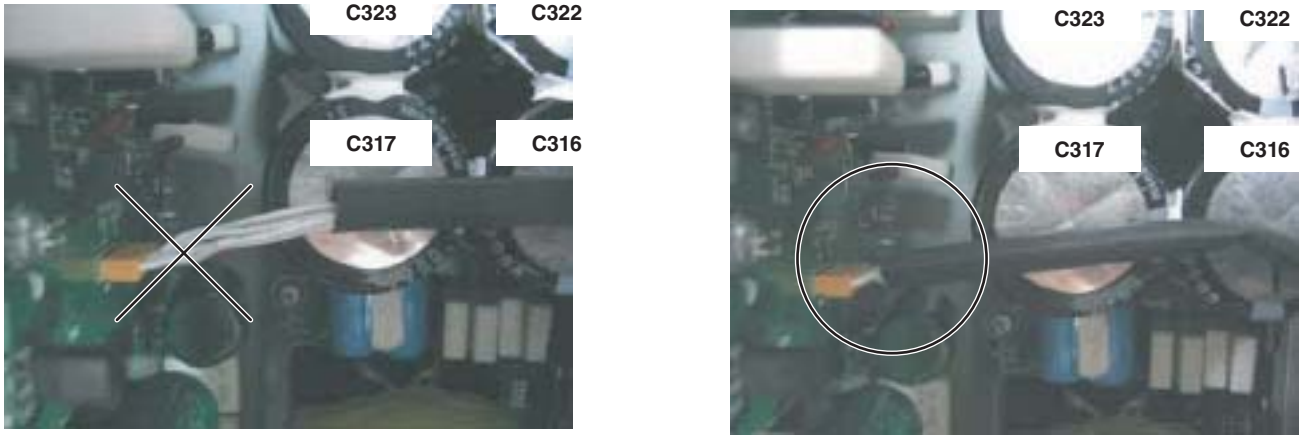



Fig. 36（図 36）

## 12. Prevention WK02070 from touching connector terminal

Perform wiring the connector assembly (WK02070) with care so that its uncovered portion with the SUMI tube does not touch the bare terminal of the connector (CN203) of the RS232-GPI circuit board. (Fig. 37)

## 12. 束線 WK02070 とコネクター端子の接触防止

束線（WK02070）を配線するとき、スミチューブに覆われていない部分がコネクターの端子（RS232-GPI シートの CN203）に接触しないように注意して配線してください。（図 37）

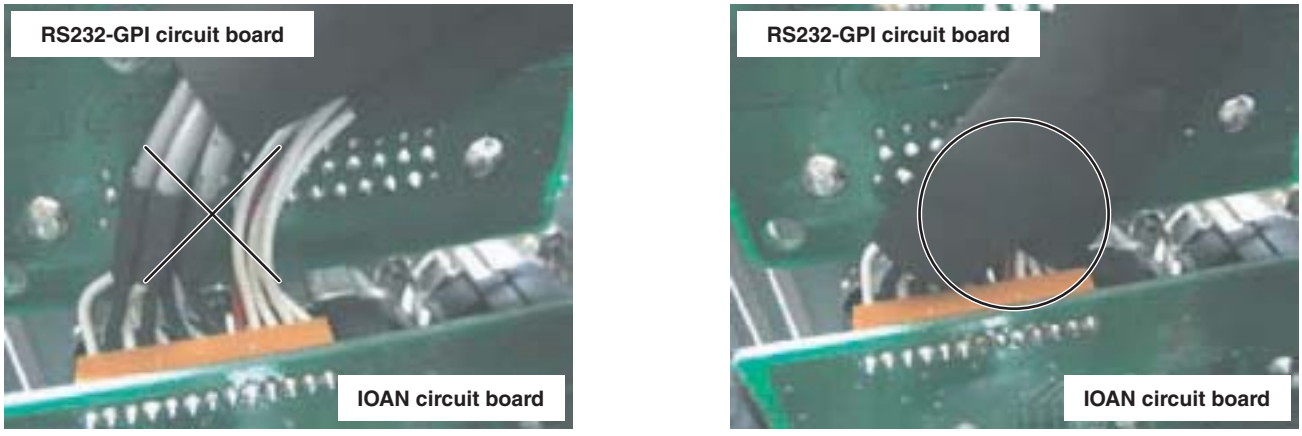



**Fig. 37（図 37）**

## 13. Adhesive cloth tape

Cover the two screws near R587 and R588 of each PA unit (190 and 230) with adhesive cloth tape (185 and 225) as shown in the figure below.
(Fig. 38)

## 13. アセテートクロス粘着テープ

各 PA ユニット（190、230）の R587、R588 の直近にある 2 つのネジを下図のようにアセテートクロステープ（185、225）で覆います。
（図 38）

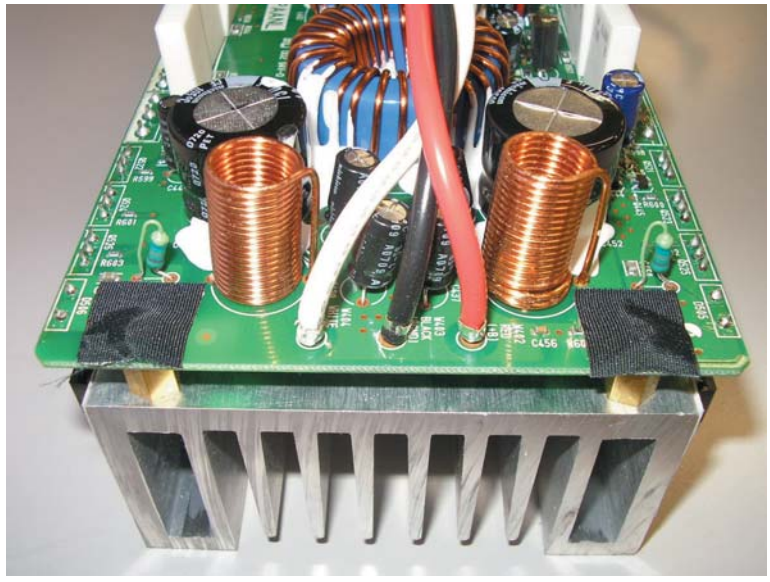


**Fig. 38（図 38）**

## 14. Confirmation of Switch LED lighting

With the front panel 2 (530) uninstalled, confirm that the LEDs of SW003–SW006 light. (Fig. 39)

### Procedure

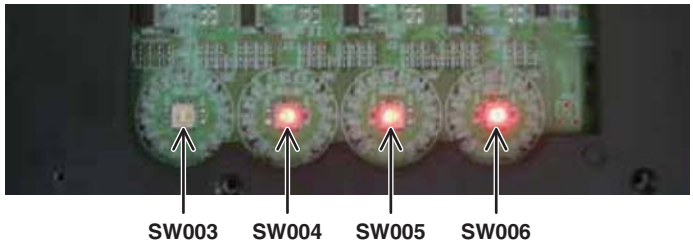
1. Press the power switch of this unit to turn on the power.
2. Press the switches (SW003–SW006) on the PN-AN circuit board, and confirm that both LEDs of each switch light.

## 14. スイッチ LED 点灯確認

フロントパネル 2 を取り外した状態で、SW003 ～ SW006 の LED 点灯を確認します。（図 39）

### 手順

1. 本機の電源スイッチを ON にします。
2. PN-AN シートのスイッチ（SW003 ～ SW006）を押し、各スイッチの両方の LED が点灯することを確認します。




| OK | NG | | |
|---|---|---|---|
| | | | |
| Lighting of both<br>（両方とも点灯） | Left is turned off<br>（左が消灯） | Right is turned off<br>（右が消灯） | Turning off of both<br>（両方とも消灯） |

**Fig. 39（図 39）**

# ■ DISASSEMBLY PROCEDURES（分解手順）

**1. Top Cover and NX-DFLT Card (Time required: about 3 minutes)**

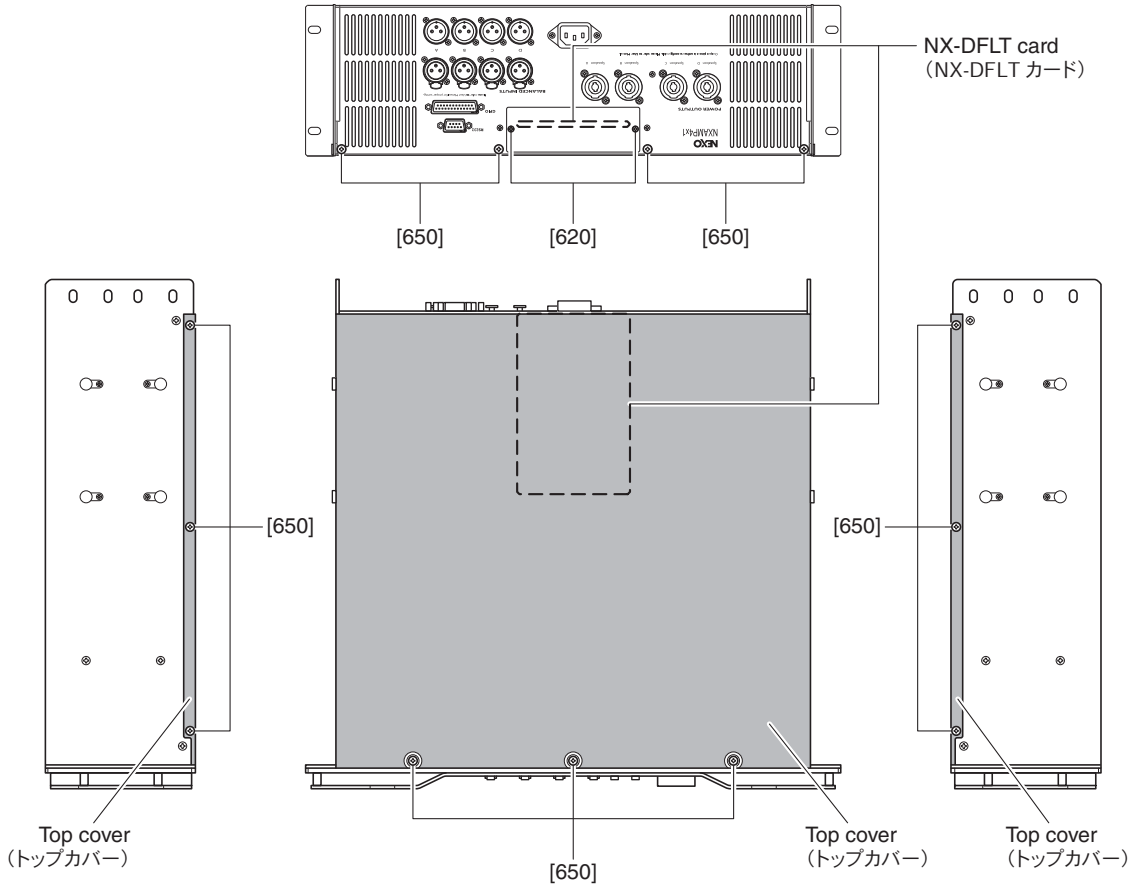
1-1. Remove the thirteen (13) screws marked [650]. The top cover can then be removed. (Fig. 1)

1-2. Remove the two (2) screws marked [620]. The NX-DFLT card can then be removed. (Fig. 1)

**1. トップカバー、NX-DFLT カード（所要時間：約 3 分）**

1-1. ［650］のネジ 13 本を外し、トップカバーを外します。（図 1）

1-2. ［620］のネジ 2 本を外し、NX-DFLT カードを外します。（図 1）




**[620]: BIND HEAD TAPPING SCREW-S 3x6 MFZN2B3 (--) S タイト＋ BIND**
**[650]: BIND HEAD TAPPING SCREW-B 4x8 MFZN2B3 (--) B タイト＋ BIND**

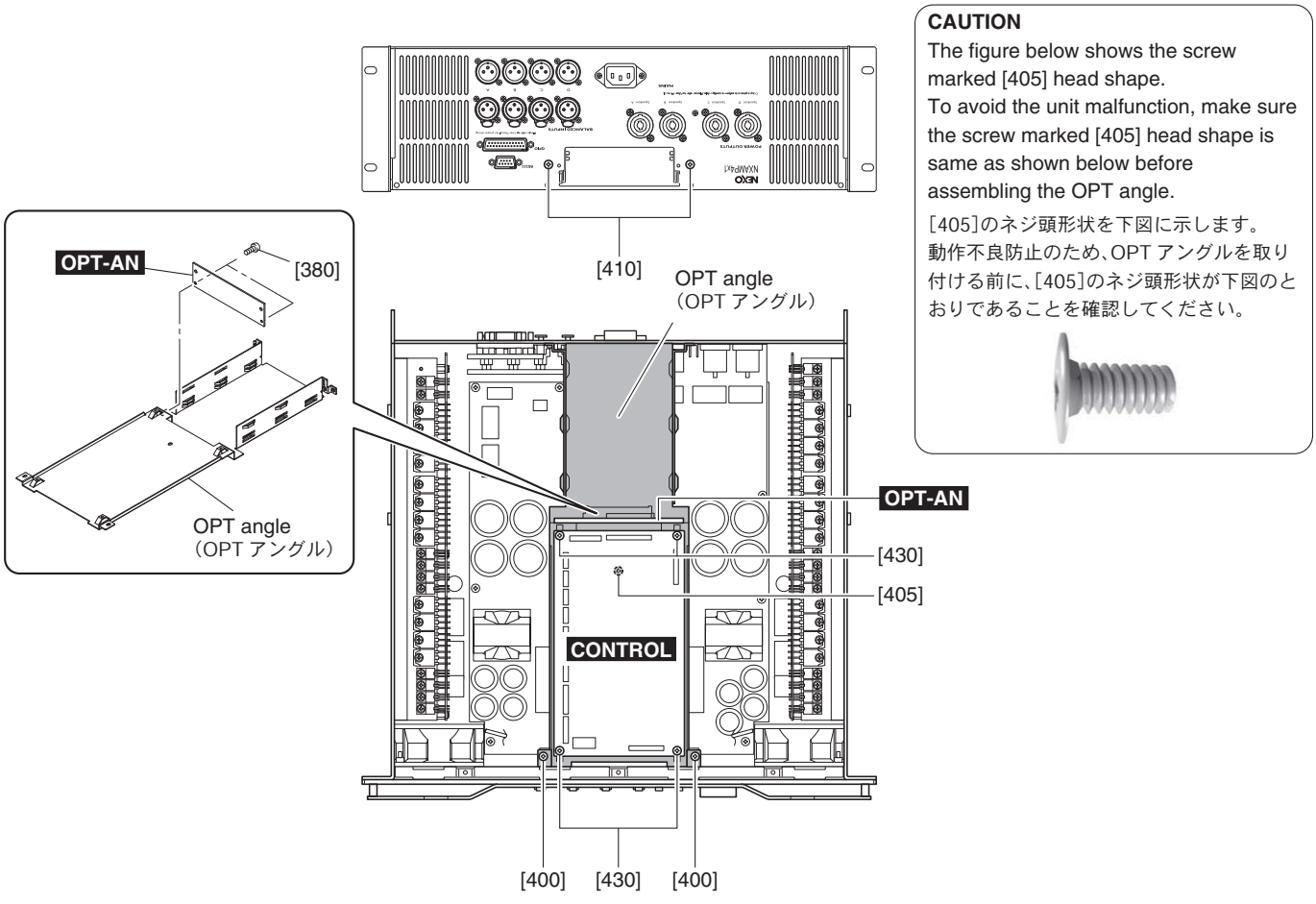
**Fig. 1（図 1）**

## 2. CONTROL Circuit Board, OPT angle and OPT-AN Circuit Board (Time required: about 10 minutes)

2-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
2-2. Disconnect the connector assemblies from the CONTROL circuit board. (Fig. 2)
2-3. Remove the four (4) screws marked [430]. The CONTROL circuit board can then be removed. (Fig. 2)
2-4. Remove the two (2) screws marked [400], one (1) screw marked [405] and the two (2) screws marked [410]. The OPT angle can then removed together with the OPT-AN circuit board. (Fig. 2)
2-5. Remove the two (2) screws marked [380]. The OPT-AN circuit board and OPT angle can then be separated. (Fig. 2)

## 2. CONROL シート、OPT アングル、OPT-AN シート（所要時間：約 10 分）

2-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
2-2. CONROL シートから束線を外します。（図 2）
2-3. ［430］のネジ 4 本を外し、CONROL シートを外します。（図 2）
2-4. ［400］のネジ 2 本、［405］のネジ 1 本、［410］のネジ 2 本を外し、OPT アングルを OPT-AN シートと共に外します。（図 2）
2-5. ［380］のネジ 2 本を外し、OPT-AN シートと OPT アングルを別けます。（図 2）




**CAUTION**
The figure below shows the screw marked [405] head shape.
To avoid the unit malfunction, make sure the screw marked [405] head shape is same as shown below before assembling the OPT angle.
［405］のネジ頭形状を下図に示します。
動作不良防止のため、OPT アングルを取り付ける前に、［405］のネジ頭形状が下図のとおりであることを確認してください。



**[380]: BIND HEAD TAPPING SCREW-S 3x6 MFZN2W3 (--) S タイト＋ BIND**
**[400]: BIND HEAD TAPPING SCREW-S 3x6 MFZN2W3 (--) S タイト＋ BIND**
**[405]: BIND HEAD TAPPING SCREW-S 3x6 MFZN2B3 (--) S タイト＋ BIND**
**[410]: BIND HEAD TAPPING SCREW-S 3x6 MFZN2B3 (--) S タイト＋ BIND**
**[430]: BIND HEAD TAPPING SCREW-S 3x6 MFZN2W3 (--) S タイト＋ BIND**

**Fig. 2（図 2）**

### 3. OUTANL Circuit Board (Time required: about 15 minutes)

3-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)

3-2. Remove the CONTROL circuit board and the OPT angle. (See procedure 2.)

3-3. Disconnect the connector assemblies from the OUTANL circuit board. (Fig. 3)

3-4. Remove the eight (8) screws marked [280], the one (1) screw marked [290] and the one (1) screw marked [285]. The OUTANL circuit board can then be removed together with the two (2) insulation sheets and the two (2) shields. (Fig. 3)

3-6. Remove the three (3) plastic rivets marked [277]. The OUTANL circuit board can be separated from the two (2) insulation sheets and the two (2) shields attached to them. (Fig. 3)

**Note:** The two (2) insulation sheets and the two (2) shields can not be separated because they are attached each other with both side adhesive tapes.

### 3. OUTANL シート（所要時間：約 15 分）

3-1. トップカバー、NX-DFLT カードを外します。（1 項参照）

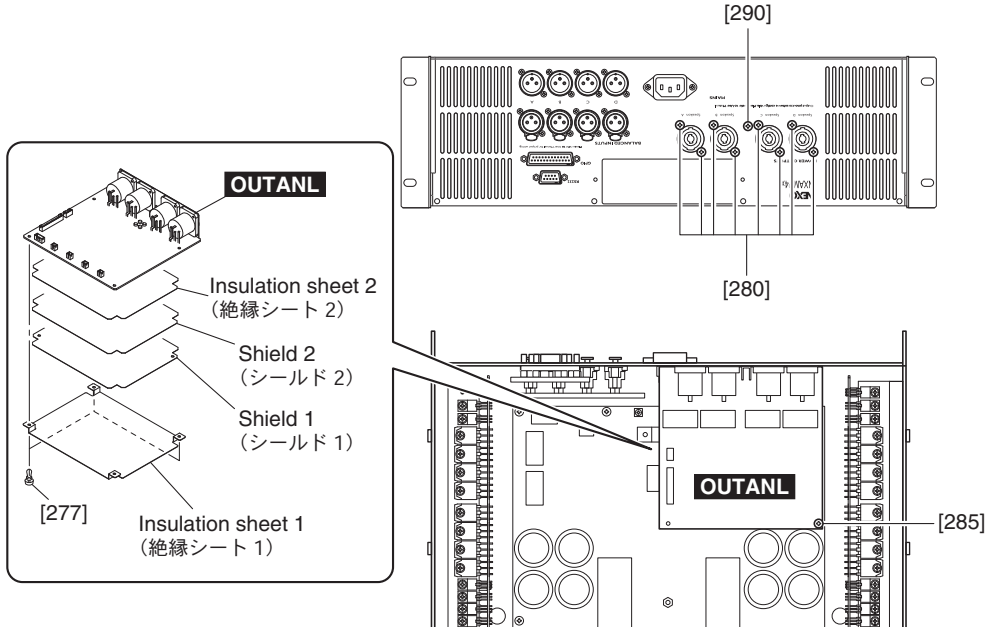
3-2. CONROL シート、OPT アングルを外します。（2 項参照）

3-3. OUTANL シートから束線を外します。（図 3）

3-4. ［280］のネジ 8 本、［290］のネジ 1 本、［285］のネジ 1 本を外し、OUTANL シートを 2 枚の絶縁シート、2 枚のシールドと共に外します。（図 3）

3-5. ［277］のプラスチックリベット 3 個を外し、OUTANL シートを絶縁シート 2 枚とこれらのシートに貼付されたシールド 2 枚から別けます。（図 3）

**注：** 絶縁シート 2 枚とシールド 2 枚は、両面テープで互いに貼り付けられているために分離することはできません。




**[277]: PLASTIC RIVET NRP-345 (--) プラスチックリベット**
**[280]: FLAT HEAD TAPPING SCREW-B 3x8 MFZN2B3 (--) B タイト＋ FLAT**
**[285]: BIND HEAD TAPPING SCREW-S 3x6 MFZN2W3 (--) S タイト＋ BIND**
**[290]: BIND HEAD TAPPING SCREW-B 3x8 MFZN2B3 (--) B タイト＋ BIND**

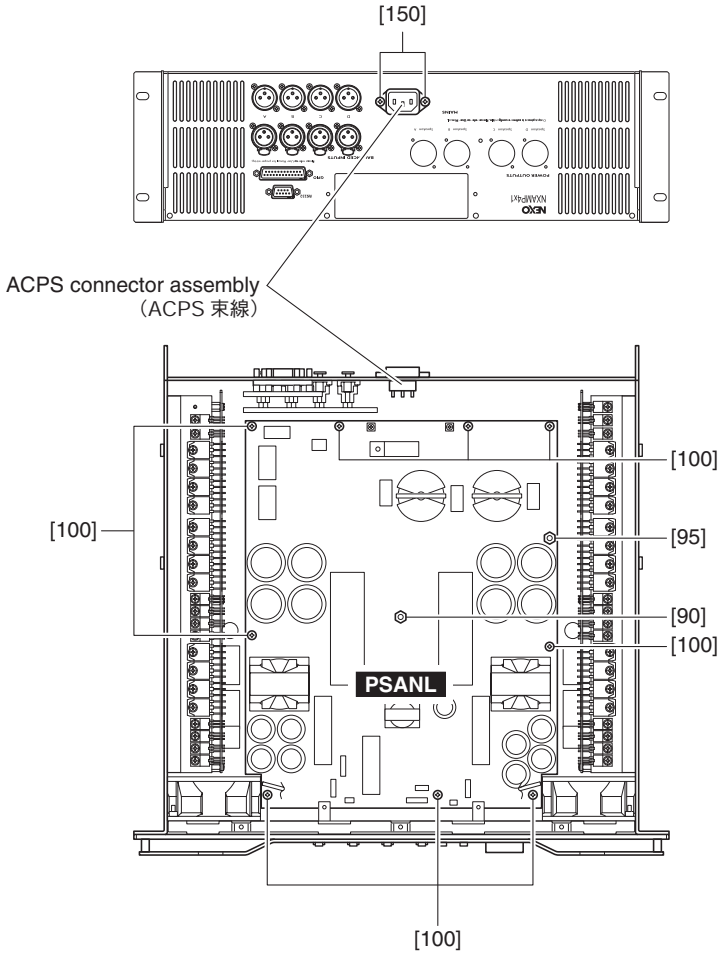
**Fig. 3（図 3）**

## 4. PSANL Circuit Board (Time required: about 20 minutes)

4-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
4-2. Remove the CONTROL circuit board and the OPT angle. (See procedure 2.)
4-3. Remove the OUTANL circuit board. (See procedure 3.)
4-4. Remove the two (2) screws marked [150], and remove the ACPS connector assembly. (Fig. 4)
4-5. Disconnect the connector assemblies from the PSANL circuit board. (Fig. 4)
4-6. Remove the nine (9) screws marked [100], the one (1) hexagonal spacer marked [90] and the one (1) hexagonal spacer marked [95]. The PSANL circuit board can then be removed. (Fig. 4)

## 4. PSANL シート（所要時間：約 20 分）

4-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
4-2. CONROL シート、OPT アングルを外します。（2 項参照）
4-3. OUTANL シートを外します。（3 項参照）
4-4. ［150］のネジ 2 本を外し、ACPS 束線を外します。（図 4）
4-5. PSANL シートから束線を外します。（図 4）
4-6. ［100］のネジ 9 本、［90］の六角スペーサー 1 個、［95］の六角スペーサー 1 個を外し、PSANL シートを外します。（図 4）




**[90]:** **HEXAGONAL SPACER H=89 B=5.5 (--) 六角スペーサー**
**[95]:** **HEXAGONAL SPACER H=41 B=5.5 (--) 六角スペーサー**
**[100]:** **BIND HEAD TAPPING SCREW-S 3x6 MFZN2W3 (--) S タイト＋ BIND**
**[150]:** **FLAT HEAD TAPPING SCREW-B 3x8 MFZN2B3 (--) B タイト＋ FLAT** (for J, U models)
**[150]:** **BIND HEAD TAPPING SCREW-B 3x8 MFZN2B3 (--) B タイト＋ BIND** (for CHN model)

**Fig. 4（図 4）**

### 5. INANL Circuit Board (Time required: about 7 minutes)

5-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
5-2. Disconnect the connector assembly from the INANL circuit board. (Fig. 5)
5-3. Remove the sixteen (16) screws marked [70]. The INANL circuit board can then be removed. (Fig. 5)

### 6. RS232-GPI Circuit Board (Time required: about 7 minutes)

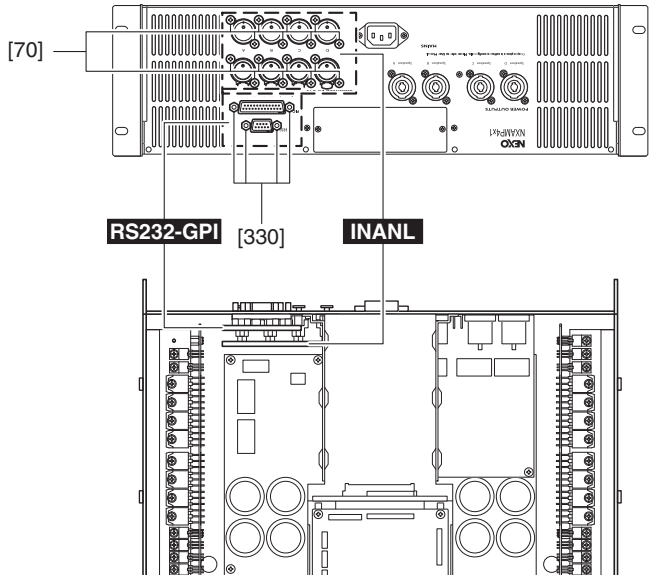
6-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
6-2. Disconnect the flat cable from the RS232-GPI circuit board. (Fig. 5)
6-3. Remove the four (4) hexagonal lock screws marked [330]. The RS232-GPI circuit board can then be removed. (Fig. 5)

### 5. INANL シート（所要時間：約 7 分）

5-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
5-2. INANL シートから束線を外します。（図 5）
5-3. ［70］のネジ 16 本を外し、INANL シートを外します。（図 5）

### 6. RS232-GPI シート（所要時間：約 7 分）

6-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
6-2. RS232-GPI シートからフラットケーブルを外します。（図 5）
6-3. ［330］の 6 角ロックネジ 4 本を外し、RS232-GPI シートを外します。（図 5）




**[70]: BIND HEAD TAPPING SCREW-B 2.6x8 MFZN2B3 (--) B タイト＋ BIND**
**[330]: HEXAGONAL LOCK SCREW (--) 6 角ロックネジ**

**Fig. 5（図 5）**

## 7. Left (CH1, CH2) PA unit (Time required: about 15 minutes)

7-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
7-2. Remove the CONTROL circuit board and the OPT angle. (See procedure 2.)
7-3. Disconnect the connector assemblies which connects the left PA unit and other units. (Fig. 6)
7-4. Remove the four (4) screws marked [670A], and remove the four (4) screw covers marked [660A]. (Fig. 6)
7-5. Remove the six (6) screws marked [220]. The left PA unit can then be removed. (Fig. 6)

## 8. Right (CH3, CH4) PA unit (Time required: about 15 minutes)

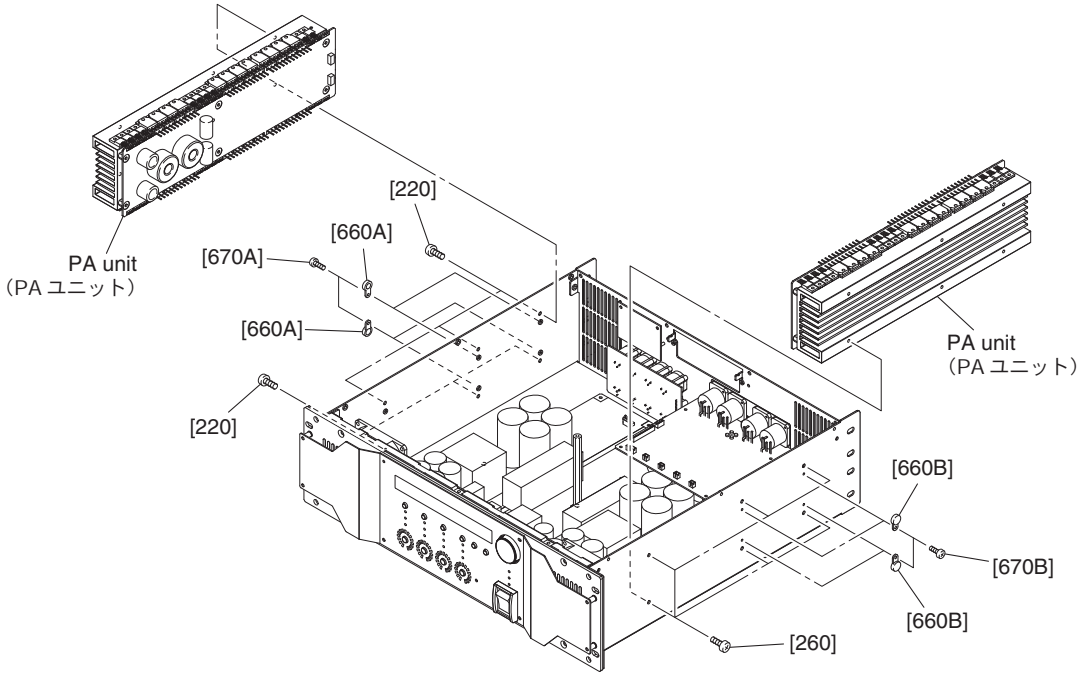
8-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
8-2. Remove the CONTROL circuit board and the OPT angle. (See procedure 2.)
8-3. Disconnect the connector assemblies which connects the right PA unit and other units. (Fig. 6)
8-4. Remove the four (4) screws marked [670B], and remove the four (4) screw covers marked [660B]. (Fig. 6)
8-5. Remove the six (6) screws marked [260]. The right PA unit can then be removed. (Fig. 6)

## 7. 左側（CH1、CH2）の PA ユニット（所要時間：約 15 分）

7-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
7-2. CONROL シート、OPT アングルを外します。（2 項参照）
7-3. 左側の PA ユニットと他のユニットを接続する束線を外します。（図 6）
7-4. ［670A］のネジ 4 本を外し、［660A］のネジカバー 4 個を外します。（図 6）
7-5. ［220］のネジ 6 本を外し、左側の PA ユニットを外します。（図 6）

## 8. 右側（CH3、CH4）の PA ユニット（所要時間：約 15 分）

8-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
8-2. CONROL シート、OPT アングルを外します。（2 項参照）
8-3. 右側の PA ユニットと他のユニットを接続する束線を外します。（図 6）
8-4. ［670B］のネジ 4 本を外し、［660B］のネジカバー 4 個を外します。（図 6）
8-5. ［260］のネジ 6 本を外し、右側の PA ユニットを外します。（図 6）




**[220]: BIND HEAD TAPPING SCREW-B 4x8 MFZN2B3 (--) B タイト＋ BIND**
**[260]: BIND HEAD TAPPING SCREW-B 4x8 MFZN2B3 (--) B タイト＋ BIND**
**[660A]: SCREW COVER T5N (--) ネジカバー**
**[660B]: SCREW COVER T5N (--) ネジカバー**
**[670A]: BIND HEAD TAPPING SCREW-B 3x8 MFZN2B3 (--) B タイト＋ BIND**
**[670B]: BIND HEAD TAPPING SCREW-B 3x8 MFZN2B3 (--) B タイト＋ BIND**

**Fig. 6（図 6）**

### 9. Front Panel Assembly (Time required: about 13 minutes)

9-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
9-2. Remove the CONTROL circuit board and the OPT angle. (See procedure 2.)
9-3. Remove the eight (8) screws marked [590]. The front panel 2 can then be removed. (Fig. 7)
9-4. Disconnect the power switch connector assembly from the PSANL circuit board. (Fig. 7)
9-5. Disconnect the flat cable from the PN-AN circuit board. (Fig. 7)
9-6. Remove the eight (8) screws marked [510]. The front panel assembly can then be removed. (Fig. 7)

### 10. PN-AN Circuit Board (Time required: about 15 minutes)

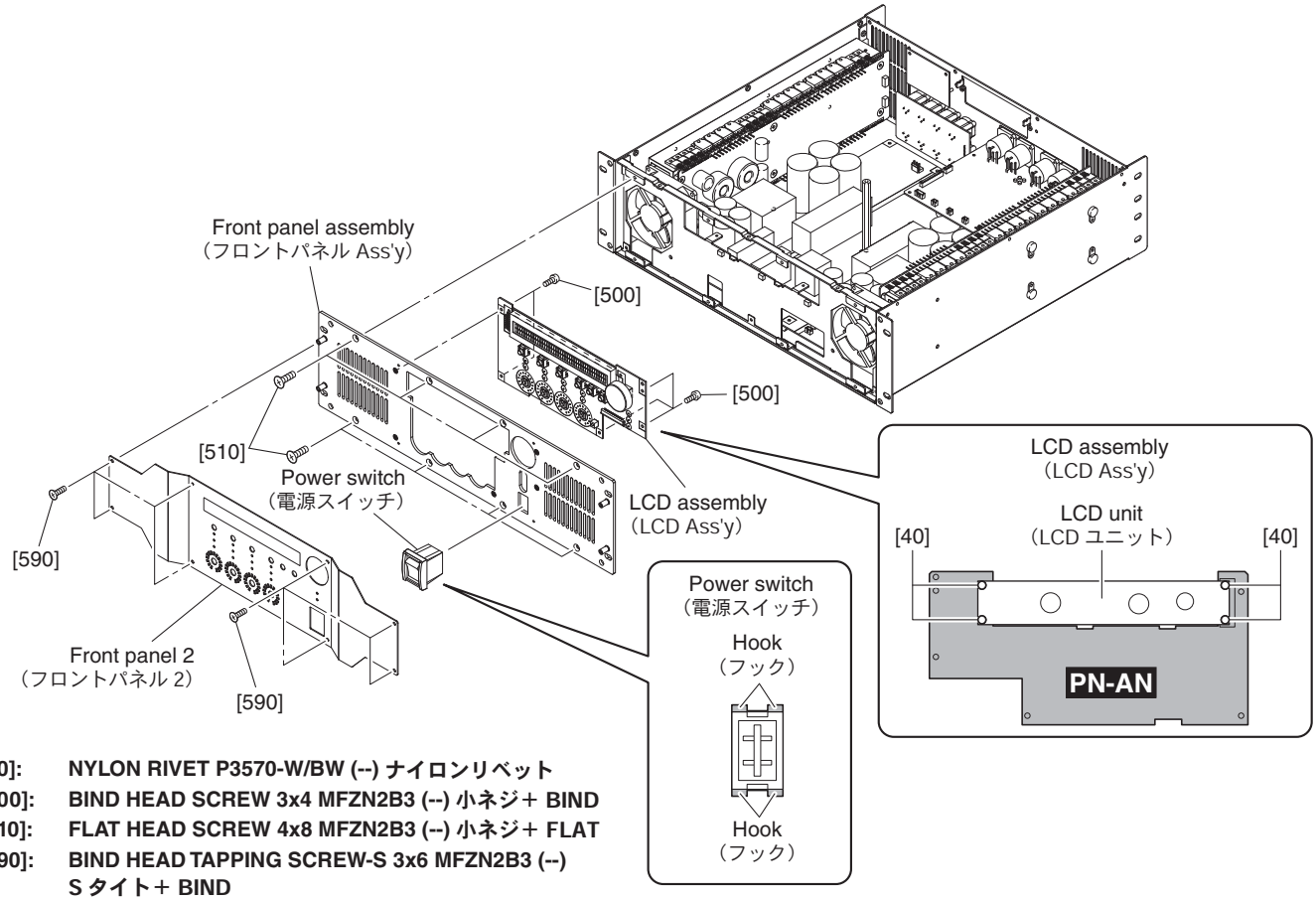
10-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
10-2. Remove the front panel assembly. (See procedure 9.)
10-3. Remove the five (5) screws marked [500]. The LCD assembly can then be removed. (Fig. 7)
10-4. Remove the four (4) nylon rivets marked [40]. The PN-AN circuit board and the LCD unit can then be separated. (Fig. 7)

### 9. フロントパネル Ass'y（所要時間：約 13 分）

9-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
9-2. CONROL シート、OPT アングルを外します。（2 項参照）
9-3. ［590］のネジ 8 本を外し、フロントパネル 2 を外します。（図 7）
9-4. PSANL シートから電源スイッチ Ass'y の線材を外します。（図 7）
9-5. PN-AN シートからフラットケーブルを外します。（図 7）
9-6. ［510］のネジ 8 本を外し、フロントパネル Ass'y を外します。（図 7）

### 10. PN-AN シート（所要時間：約 15 分）

10-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
10-2. フロントパネル Ass'y を外します。（9 項参照）
10-3. ［500］のネジ 5 本を外し、LCD Ass'y を外します。（図 7）
10-4. ［40］のナイロンリベット 4 個を外し、PN-AN シートと LCD ユニットを別けます。（図 7）




**[40]: NYLON RIVET P3570-W/BW (--) ナイロンリベット**
**[500]: BIND HEAD SCREW 3x4 MFZN2B3 (--) 小ネジ＋ BIND**
**[510]: FLAT HEAD SCREW 4x8 MFZN2B3 (--) 小ネジ＋ FLAT**
**[590]: BIND HEAD TAPPING SCREW-S 3x6 MFZN2B3 (--) S タイト＋ BIND**

**Fig. 7（図 7）**

## 11. Left DC Fan (Time required: about 15 minutes)

11-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
11-2. Remove the CONTROL circuit board and the OPT angle. (See procedure 2.)
11-3. Remove the front panel assembly. (See procedure 9.)
11-4. Disconnect the left DC fan connector assembly from the PSANL circuit board. (Fig. 8)
11-5. Remove the two (2) screws marked [40A] and the two (2) hexagonal nuts marked [50A]. The left DC fan can then be removed. (Fig. 8)

## 12. Right DC fan (Time required: about 15 minutes)

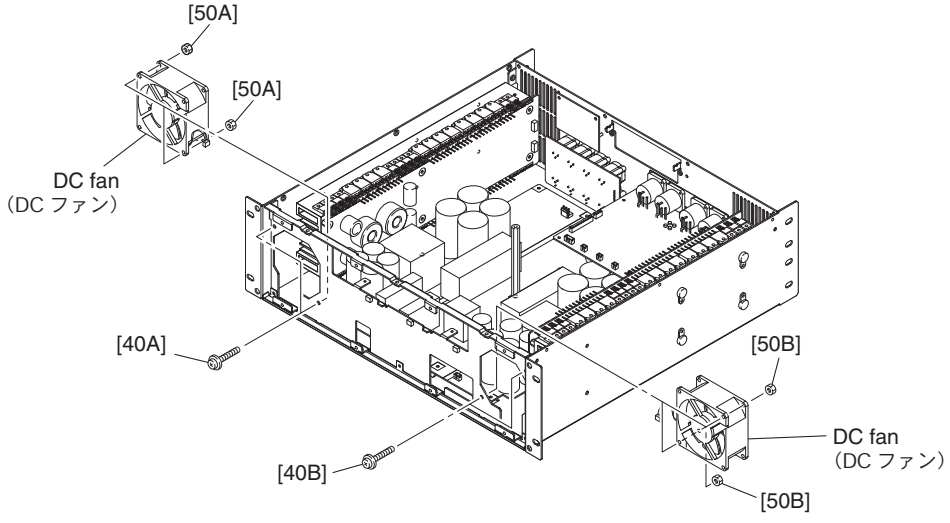
12-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
12-2. Remove the CONTROL circuit board and the OPT angle. (See procedure 2.)
12-3. Remove the front panel assembly. (See procedure 9.)
12-4. Disconnect the right DC fan connector assembly from the PSANL circuit board. (Fig. 8)
12-5. Remove the two (2) screws marked [40B] and the two (2) hexagonal nuts marked [50B]. The right DC fan can then be removed. (Fig. 8)

## 11. 左側の DC ファン（所要時間：約 15 分）

11-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
11-2. CONROL シート、OPT アングルを外します。（2 項参照）
11-3. フロントパネル Ass'y を外します。（9 項参照）
11-4. PSANL シートから左側の DC ファンの線材を外します。（図 8）
11-5. ［40A］のネジ 2 本、［50A］の六角ナット 2 個を外し、左側の DC ファンを外します。（図 8）

## 12. 右側の DC ファン（所要時間：約 15 分）

12-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
12-2. CONROL シート、OPT アングルを外します。（2 項参照）
12-3. フロントパネル Ass'y を外します。（9 項参照）
12-4. PSANL シートから右側の DC ファンの線材を外します。（図 8）
12-4. ［40B］のネジ 2 本、［50B］の六角ナット 2 個を外し、右側の DC ファンを外します。（図 8）




**[40A]: BIND HEAD SCREW 4x35 MFZN2W3 (--) 小ネジ＋ BIND**
**[40B]: BIND HEAD SCREW 4x35 MFZN2W3 (--) 小ネジ＋ BIND**
**[50A]: HEXAGONAL NUT M4 #1 (--) 6 角ナット**
**[50B]: HEXAGONAL NUT M4 #1 (--) 6 角ナット**

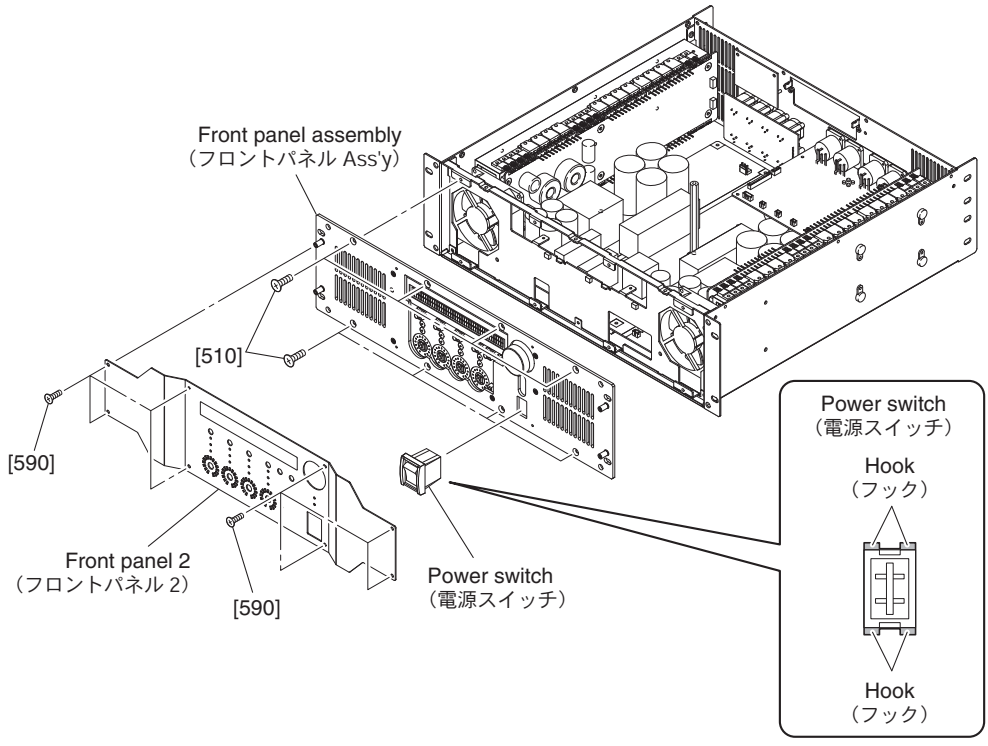
**Fig. 8（図 8）**

## 13. Power switch (Time required: about 15 minutes)

13-1. Remove the top cover and the NX-DFLT card. (See procedure 1.)
13-2. Remove the CONTROL circuit board and the OPT angle. (See procedure 2.)
13-3. Disconnect the power switch connector assembly from the PSANL circuit board. (Fig. 9)
13-4. Remove the front panel assembly. (See procedure 9.)
13-5. Release the four (4) hooks of the power switch. The power switch can then be removed from the front panel assembly. (Fig. 9)

## 13. 電源スイッチ（所要時間：約 15 分）

13-1. トップカバー、NX-DFLT カードを外します。（1 項参照）
13-2. CONROL シート、OPT アングルを外します。（2 項参照）
13-3. PSANL シートから電源スイッチ Ass'y の線材を外します。（図 9）
13-4. フロントパネル Ass'y を外します。（9 項参照）
13-5. 4 箇所のフックを外し、電源スイッチをフロントパネル Ass'y から外します。（図 9）




**[510]: FLAT HEAD SCREW 4x8 MFZN2B3 (--) 小ネジ＋ FLAT**
**[590]: BIND HEAD TAPPING SCREW-S 3x6 MFZN2B3 (--) S タイト＋ BIND**

**Fig. 9（図 9）**

# ■ LSI PIN DESCRIPTION（LSI 端子機能表）

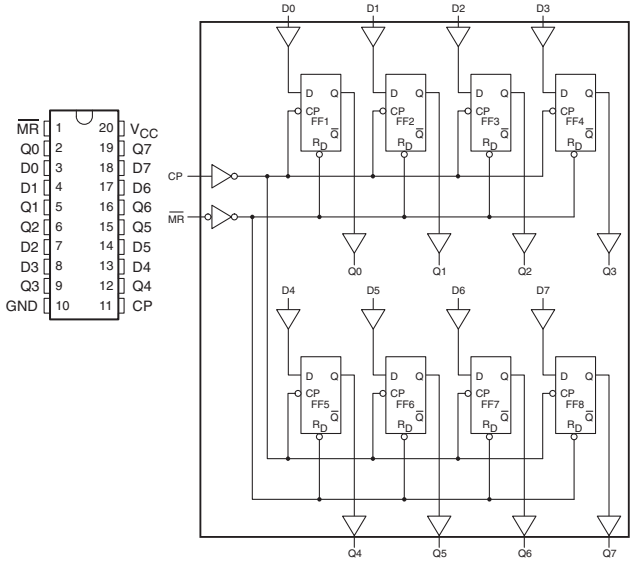
- **PCM1803ADBR** (X7357B0) **A/D CONVERTER** CONTROL: IC035, IC036, IC037, IC038

| PIN NO. | NAME | I/O | FUNCTION |
|---|---|---|---|
| 1 | $V_{INL}$ | I | Analog input, L-channel |
| 2 | $V_{INR}$ | I | Analog input, R-channel |
| 3 | $V_{REF1}$ | – | Reference voltage 1 decoupling capacitor |
| 4 | $V_{REF2}$ | – | Reference voltage 2 decoupling capacitor |
| 5 | $V_{CC}$ | – | Analog power supply, 5 V |
| 6 | AGND | – | Analog GND |
| 7 | $\overline{\text{PDWN}}$ | I | Power-down control, active-low (2) |
| 8 | BYPAS | I | HPF bypass control / LOW: Normal mode (dc reject); HIGH: Bypass mode (through) (2) |
| 9 | TEST | I | Test, must be connected to DGND (2) |
| 10 | LRCK | I/O | Audio data latch enable input/output (1) |
| 11 | BCK | I/O | Audio data bit clock input/output (1) |
| 12 | DOUT | O | Audio data digital output |
| 13 | DGND | – | Digital GND |
| 14 | $V_{DD}$ | – | Digital power supply, 3.3 V |
| 15 | SCKI | I | System clock input: 256 fs, 384 fs, 512 fs or 768 fs (3) |
| 16 | OSR | I | Oversampling ratio select input / LOW: x 64 fs, HIGH: x 128 fs (2) |
| 17 | FMT0 | I | Audio data format select input 0 / See data format section (2) |
| 18 | FMT1 | I | Audio data format select input 1 / See data format section (2) |
| 19 | MODE0 | I | Mode select input 0 / See data format section (2) |
| 20 | MODE1 | I | Mode select input 1 / See data format section (2) |

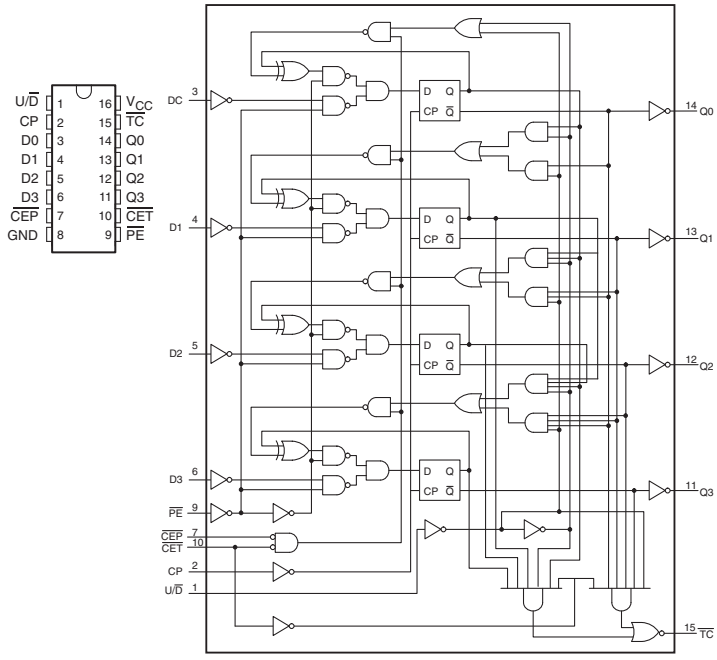
(1) Schmitt trigger input
(2) Schmitt trigger input with internal pulldown (50 kΩ, typically), 5 V tolerant
(3) Schmitt trigger input, 5 V tolerant

# ■ IC BLOCK DIAGRAM（IC ブロック図）

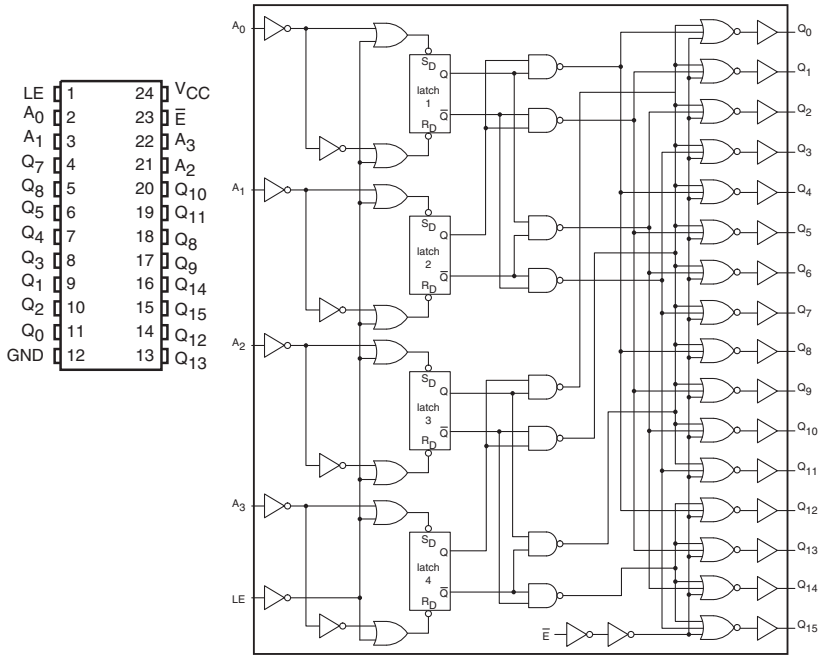
• **74HCT273PW,118** (X8681A0)
D-type Flip Flop
PN-AN: IC002, 003



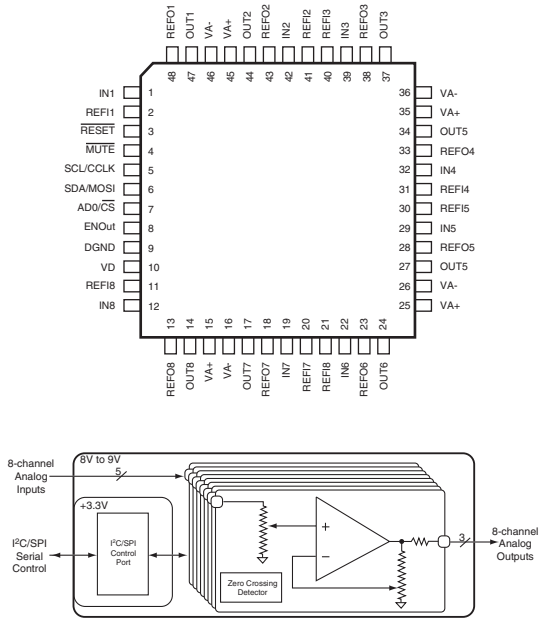

• **74LVC169PW,118** (X8482A0)
Binaly Counter
CONTROL: IC044, 045



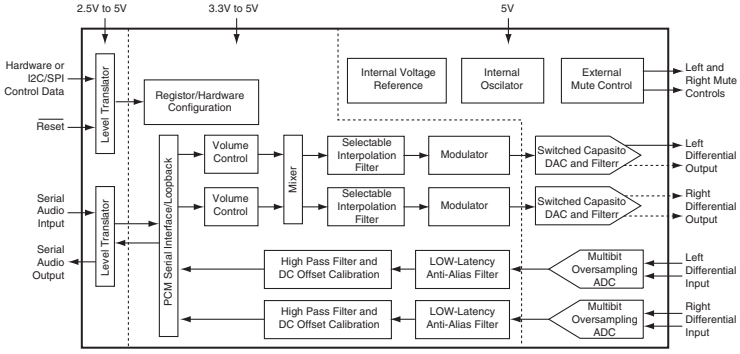

• **74HCT4514PW,118** (X8630A0)
Decoder
PN-AN: IC004-007



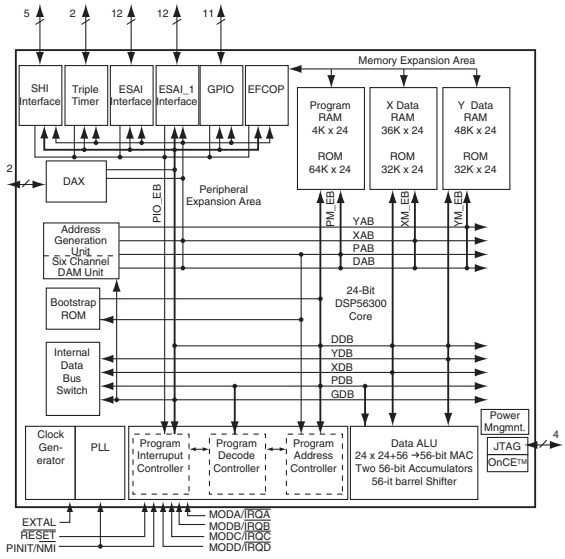

• **CS3318-CQZ** (X8486A0)
Volume Controller
CONTROL: IC001


REFO1 OUT1 VA- VA+ OUT2 REFO2 IN2 REFI2 REFI3 IN3 REFO3 OUT3
IN1 REFI1 RESET MUTE SCL/CCLK SDA/MOSI AD0/CS ENOut DGND VD REFI8 IN8
VA- VA+ OUT5 REFO4 IN4 REFI4 REFI5 IN5 REFO5 OUT5 VA- VA+
REFO8 OUT8 VA+ VA- OUT7 REFO7 IN7 REFI7 REFI8 IN6 REFO6 OUT6
8-channel Analog Inputs
8V to 9V
+3.3V
I²C/SPI Serial Control
I²C/SPI Control Port
Zero Crossing Detector
8-channel Analog Outputs

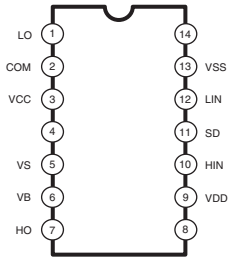
• **CS4272-CZZR** (X8487A0)
CODEC
CONTROL: IC012, 013

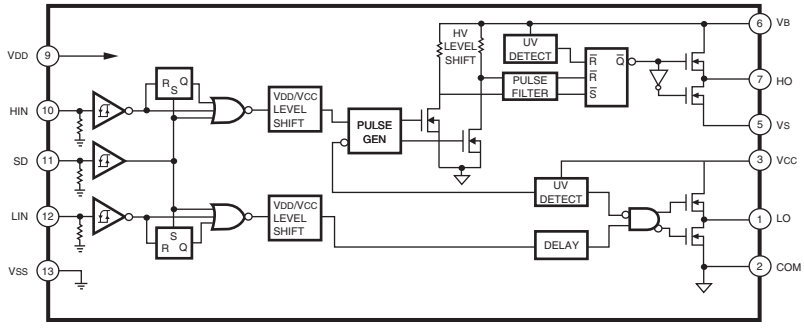



• **DSPB56371AF180** (X8489A0)
DSP
CONTROL: IC022, 023

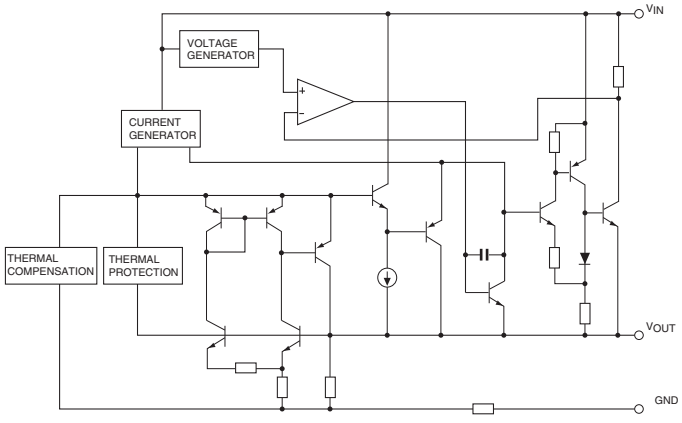



• **IR2110** (X2382A04)
Driver
PSANL: IC302, 303

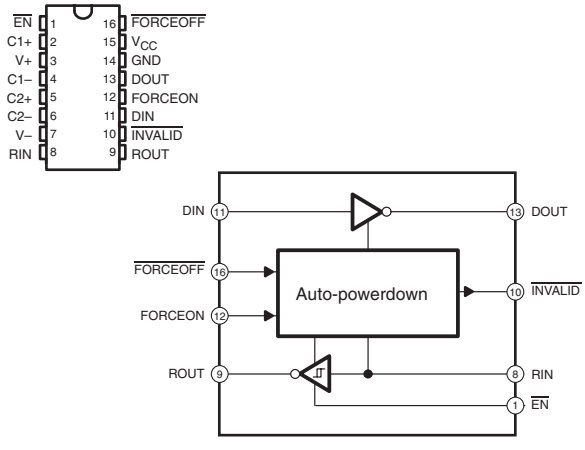


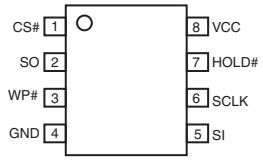

• **LD1117STR** (X8495A0)
Regulator
CONTROL: IC024

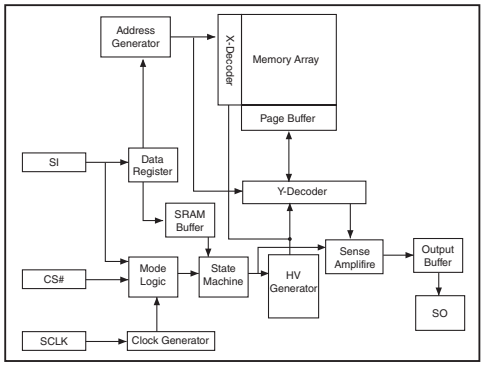



• **MAX3221CPWR** (X2757A0)
RS-232C Driver
CONTROL: IC041

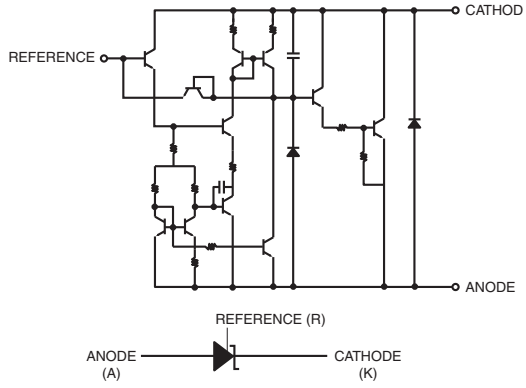


• **MX25L1605AM2C-12G** (X8718A0) (X8718B0)
Flash Memory
CONTROL: IC039

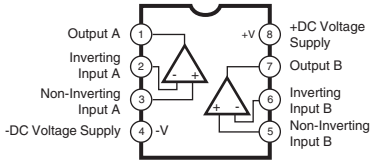


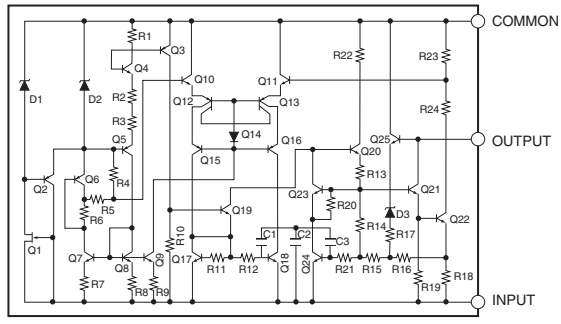

• **NJM431U (TE1)** (X6770A0)
SHUNT Regulator
PSANL: IC204



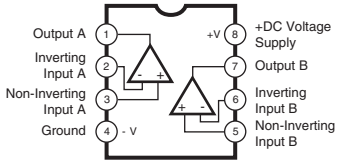

• **NJM2068M-D** (X3505A0)
Operational Amplifier
CONTROL: IC002-005, 008-011, 018-021, 028-034
INANL: IC701, 702
OUTANL: IC801, 802



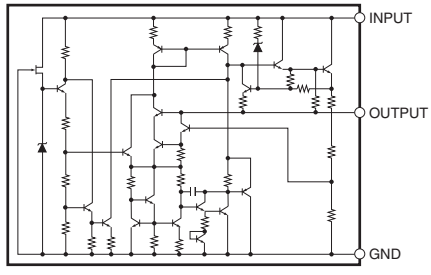

• **NJM79M09DL1A** (X5366A0)
Regulator
CONTROL: IC007



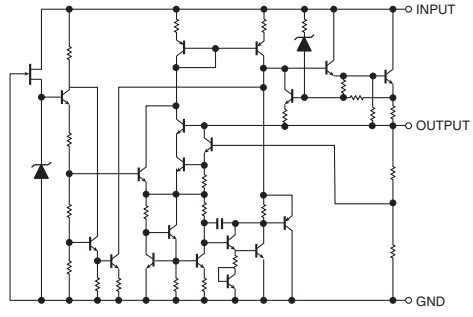

• **NJM2904V (TE1)** (XR532A0)
Operational Amplifier
CONTROL: IC047, 048, 050, 052



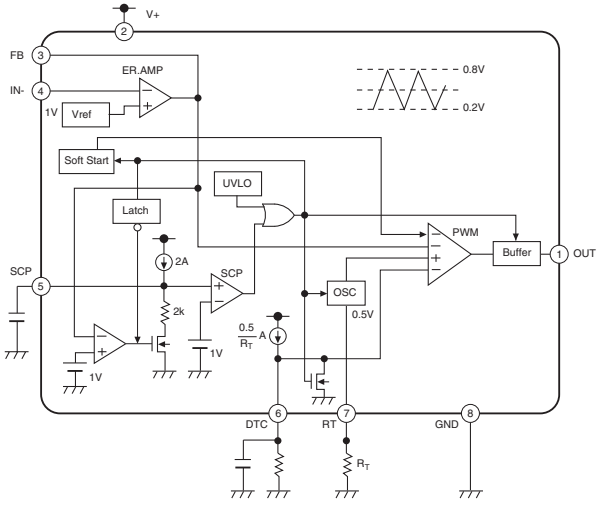

• **NJM7815FA** (XD853A0)
Regulator +15V
PSANL: IC202, 203



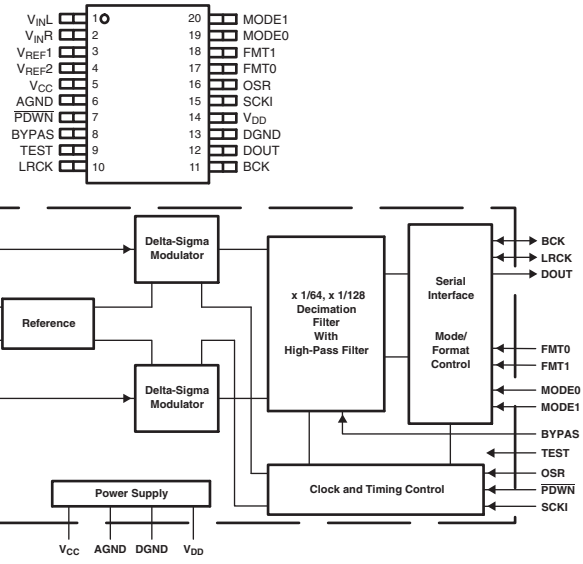

• **NJM78M09DL1A** (XZ940A0)
Regulator
CONTROL: IC006



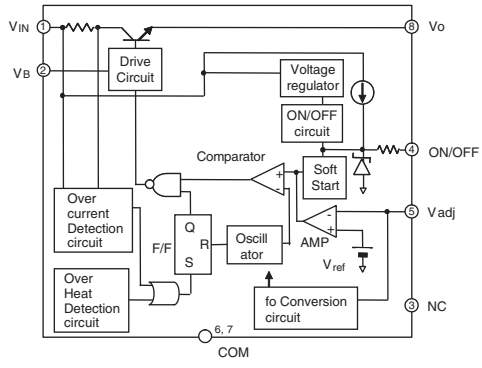
• **NJU7630-M** (X8682A0)
Regulator
PSANL: IC205



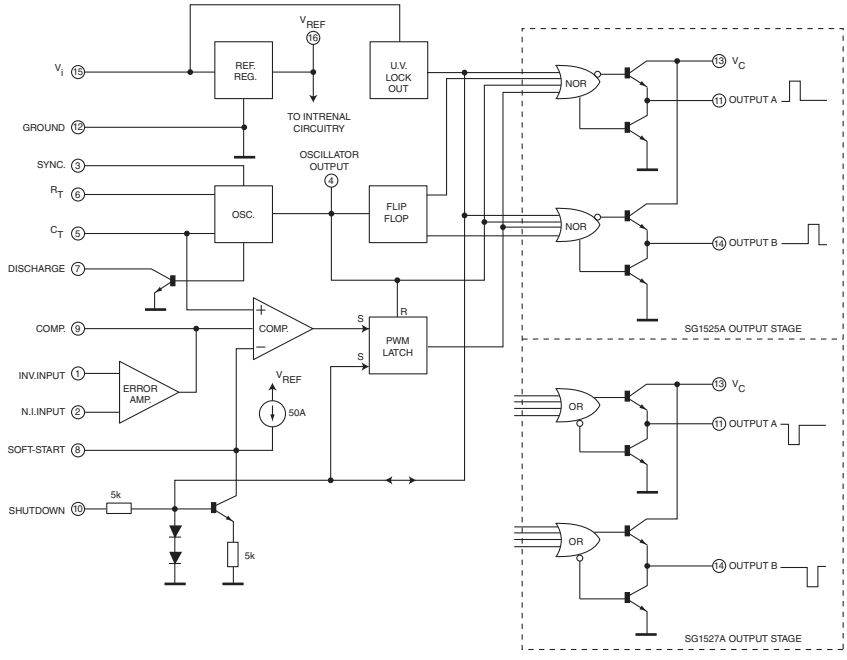

• **PCM1803ADBR** (X7357B0)
A/D Converter
CONTROL: IC035-038



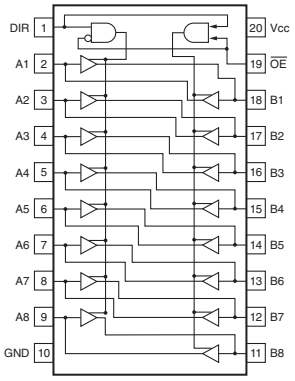

• **PQ1CX12H2ZP** (X6188A0)
Regulator
PSANL: IC208



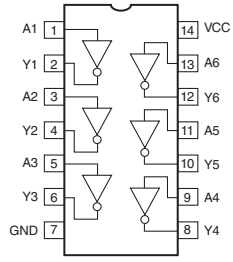

• **SG2525AN** (X8960A0)
PW Modulator
PSANL: IC301



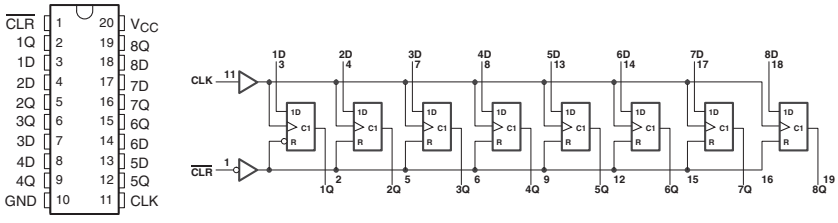
• **SN74ABT245BNSR** (XU009A0)
BUS Transceiver
CONTROL: IC062



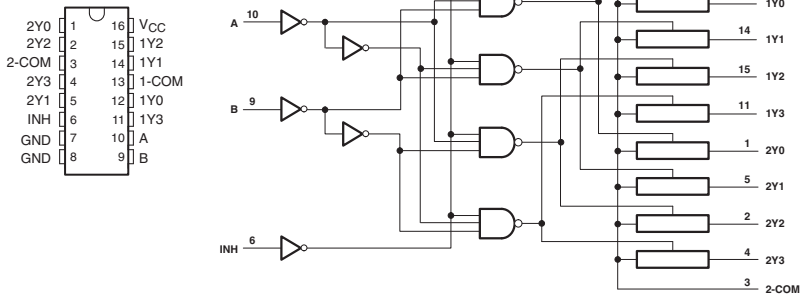

• **SN74LV14APWR** (X6688A0)
Inverter
CONTROL: IC063



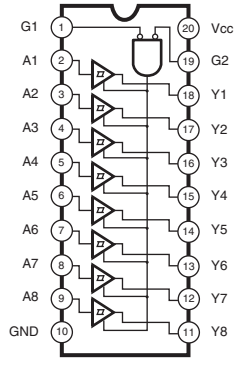

• **SN74LV273APWR** (X5074A0)
D-type Flip Flop
CONTROL: IC057-061



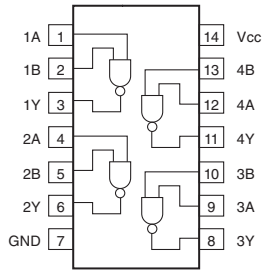

• **SN74LV4052APWR** (X6976A0)
Demultiplexer
CONTROL: IC049



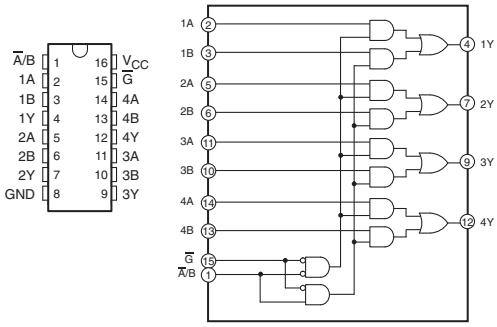

• **SN74LV541APWRBUS B** (X5966A0)
Buffer/Driver
CONTROL: IC055, 056
PN-AN: IC001



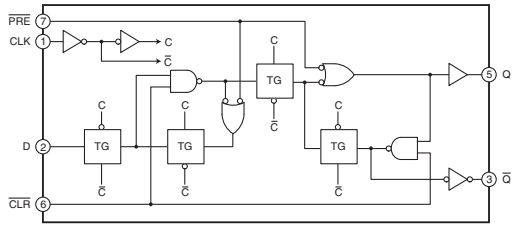

• **SN74LVC00APWR** (X5406A0)
NAND
CONTROL: IC040



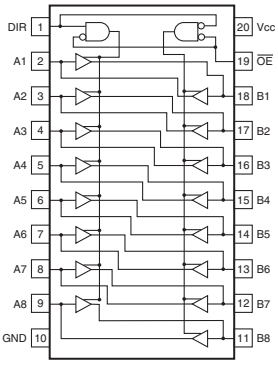
• **SN74LVC157APWR** (X6786A0)
Data Selector
CONTROL: IC046, 051



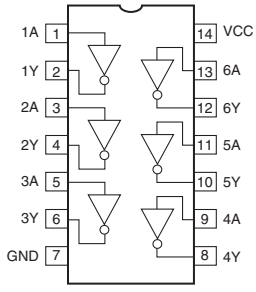

• **SN74LVC2G74DCTR** (X8709A0)
Flip Flop
CONTROL: IC042



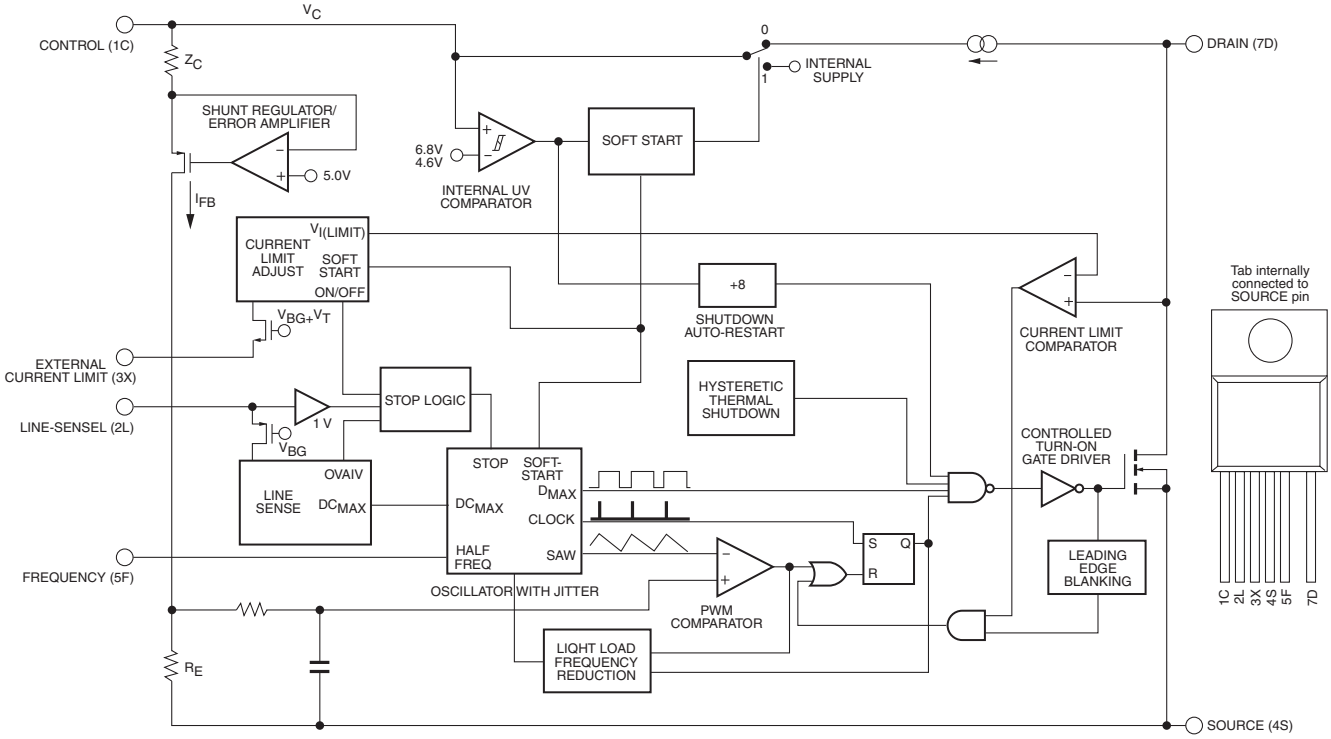

• **SN74LVC245APWR** (XZ287A0)
Bas Transceiver
CONTROL: IC054




• **TC74LCX04FT** (X8415A0)
Inverter
CONTROL: IC064




• **TOP246YN 1PD** (X8576A0)
Regulator
PSANL: IC201



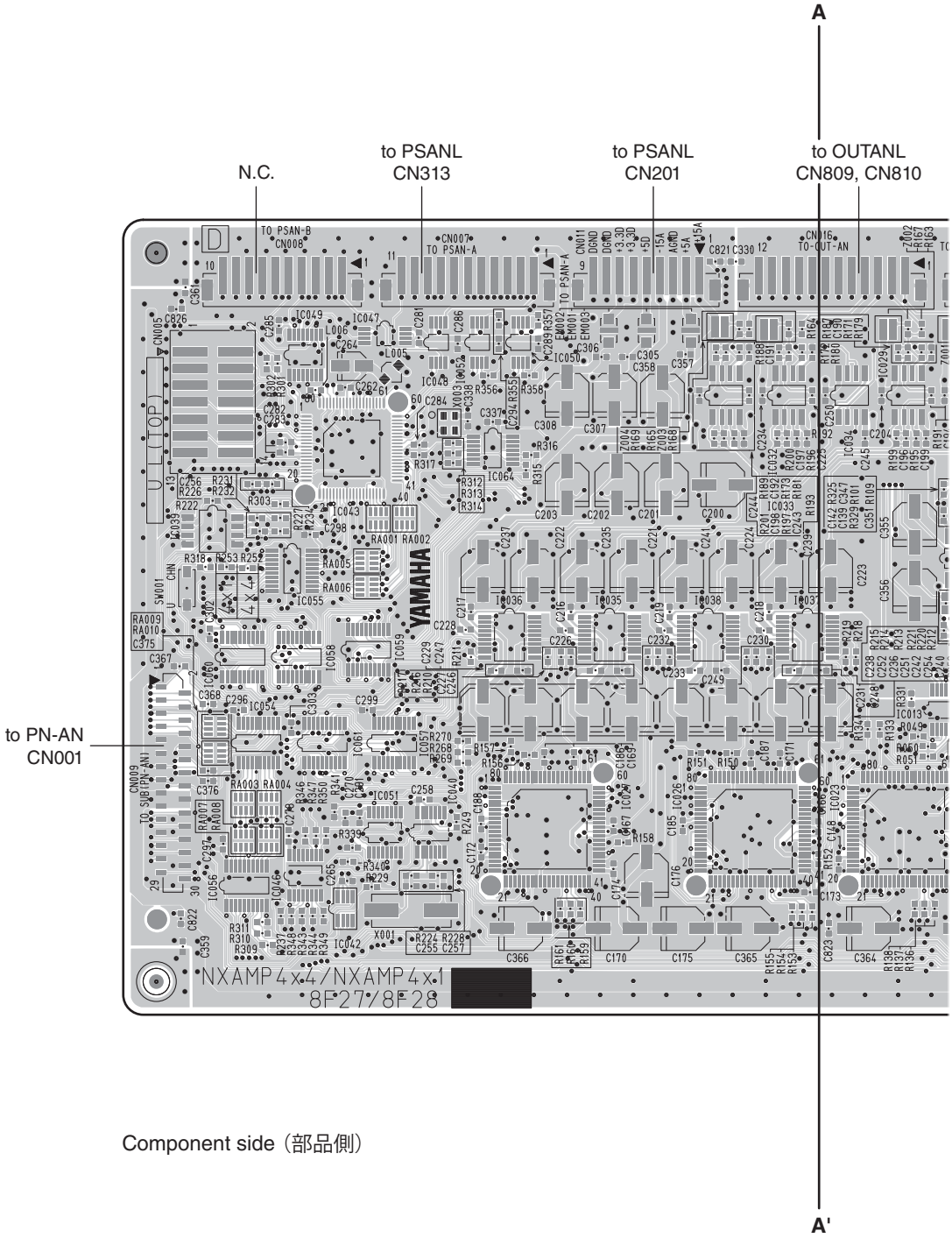
# ■ CIRCUIT BOARDS（シート基板図）

## CONTENTS（目次）


- CONTROL Circuit Board (X8710D0) .....40
- INANL Circuit Board (X8714C0) .....56
- LCD SPACER Circuit Board (X8711E0) .....57
- NX-DFLT Circuit Board (YC233A0) .....58
- OPT-AN Circuit Board (X8711E0) .....57
- OUTANL Circuit Board (X8714C0) .....44
- PAANL Circuit Board (X8713D0) .....50
- PN-AN Circuit Board (X8711E0) .....46
- PSANL Circuit Board (X8715F0) .....52
- RS232-GPI Circuit Board (X8711E0) .....57

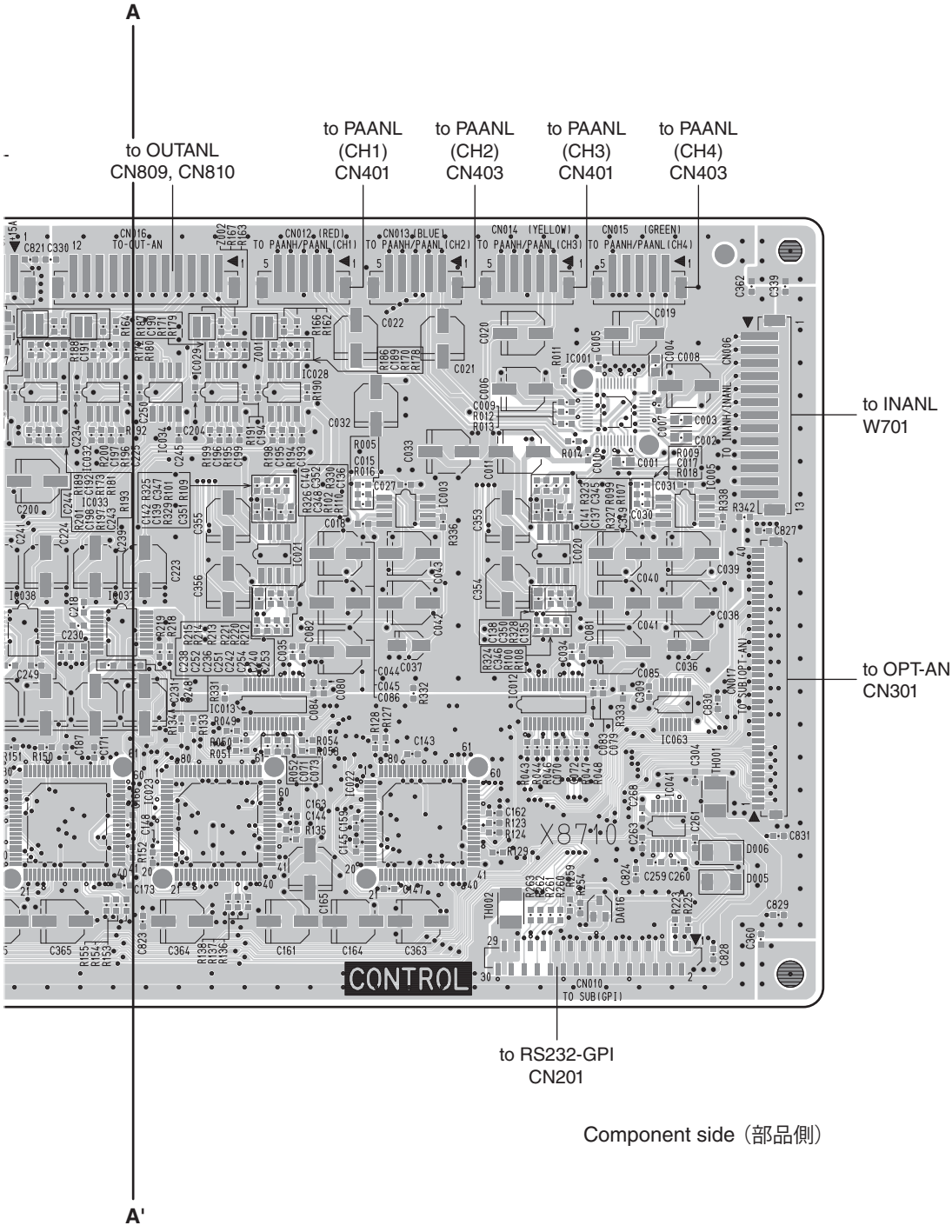

**Note: See parts list for details of circuit board component parts.**
**注： シートの部品詳細はパーツリストをご参照ください。**

- **CONTROL Circuit Board**



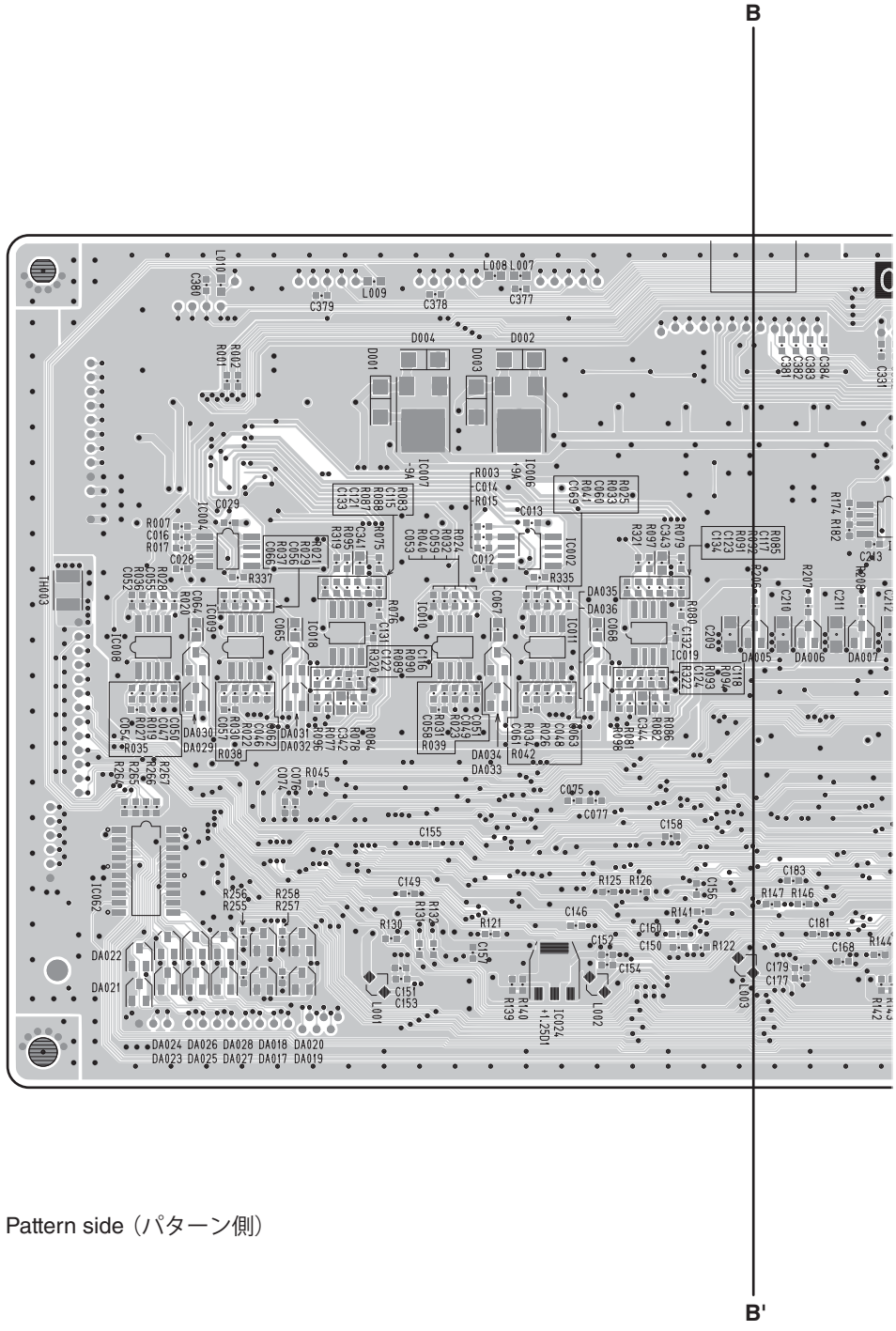

Component side（部品側）

- **CONTROL Circuit Board**



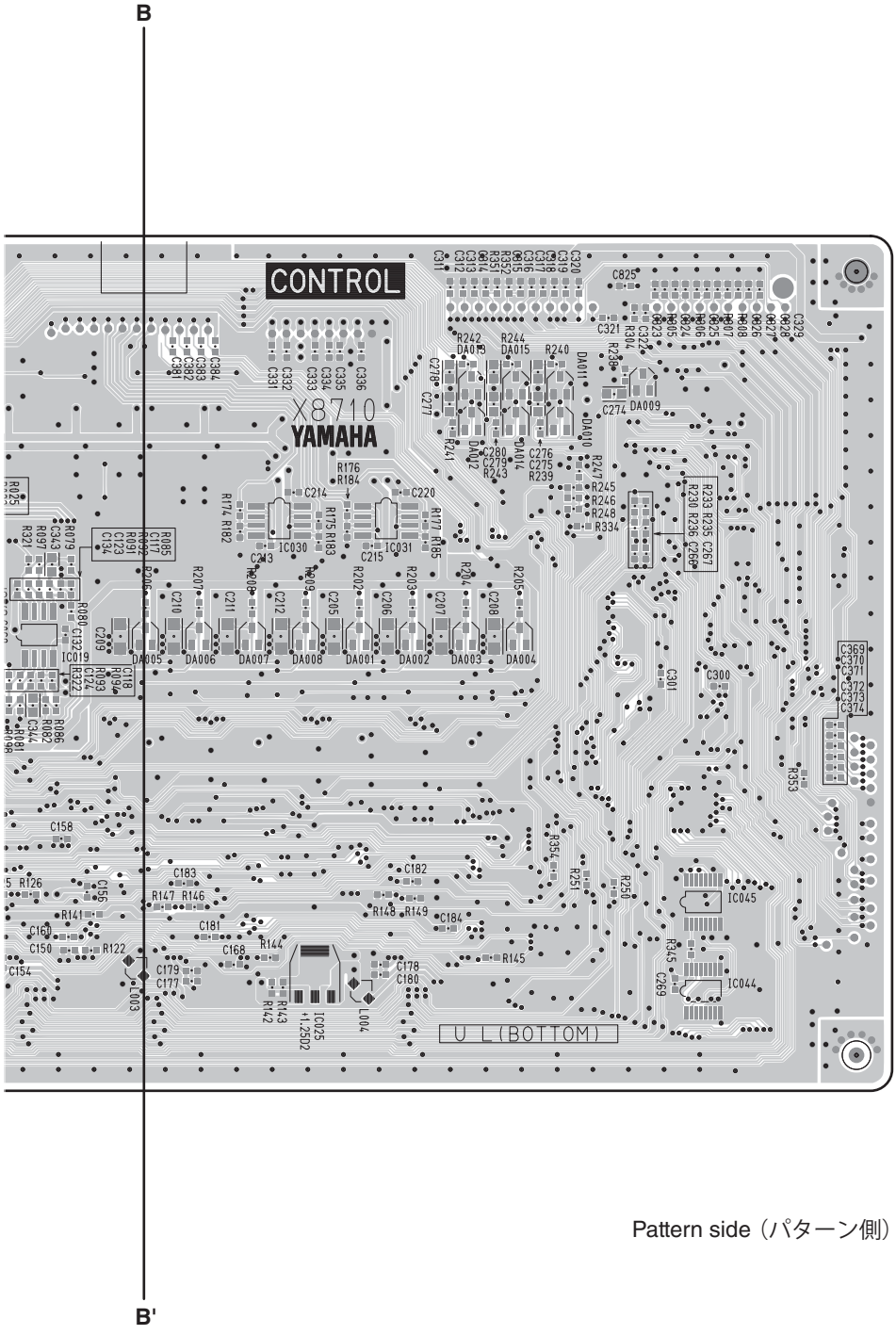

Component side（部品側）

- **CONTROL Circuit Board**



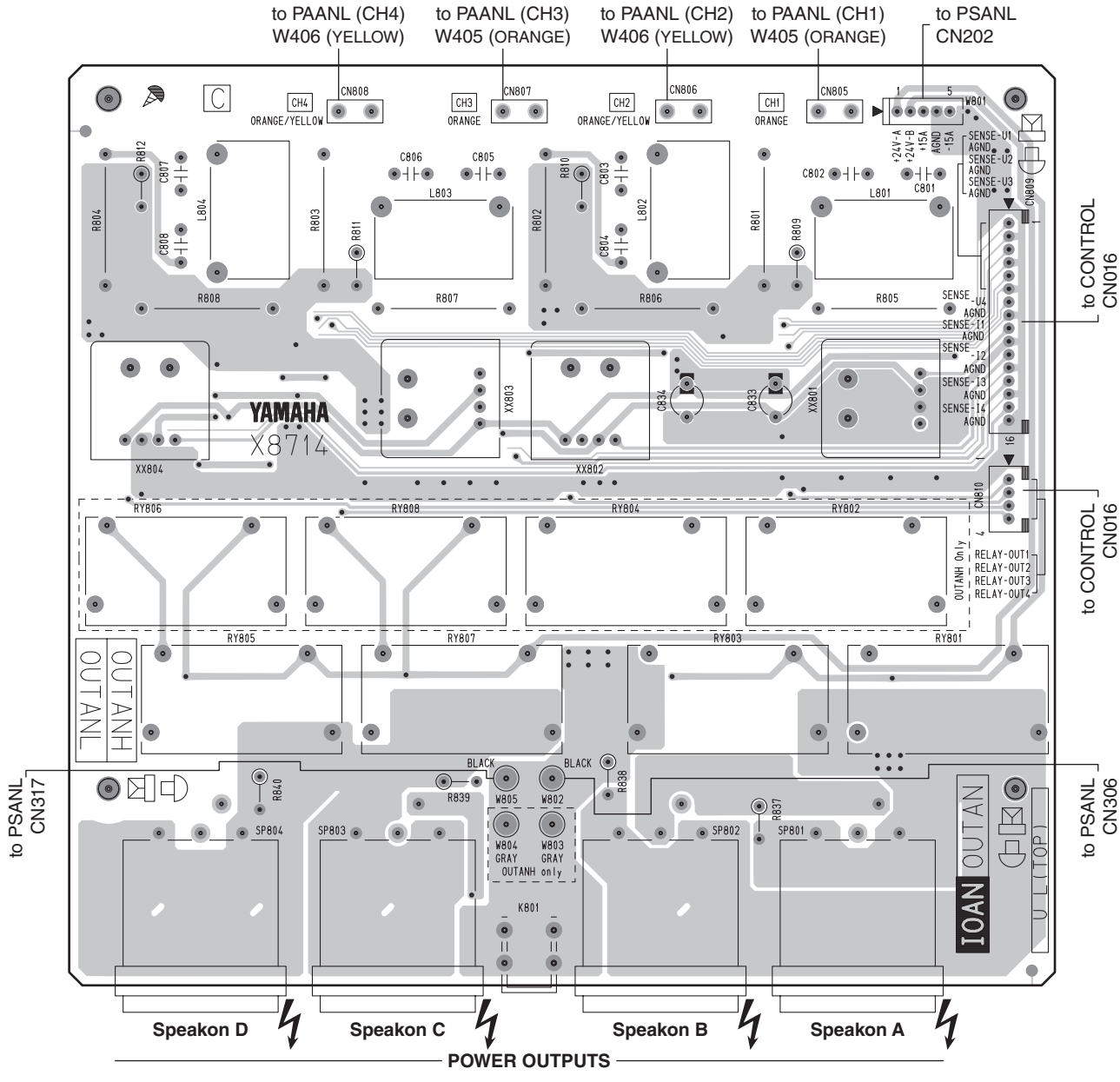

Pattern side（パターン側）

- **CONTROL Circuit Board**



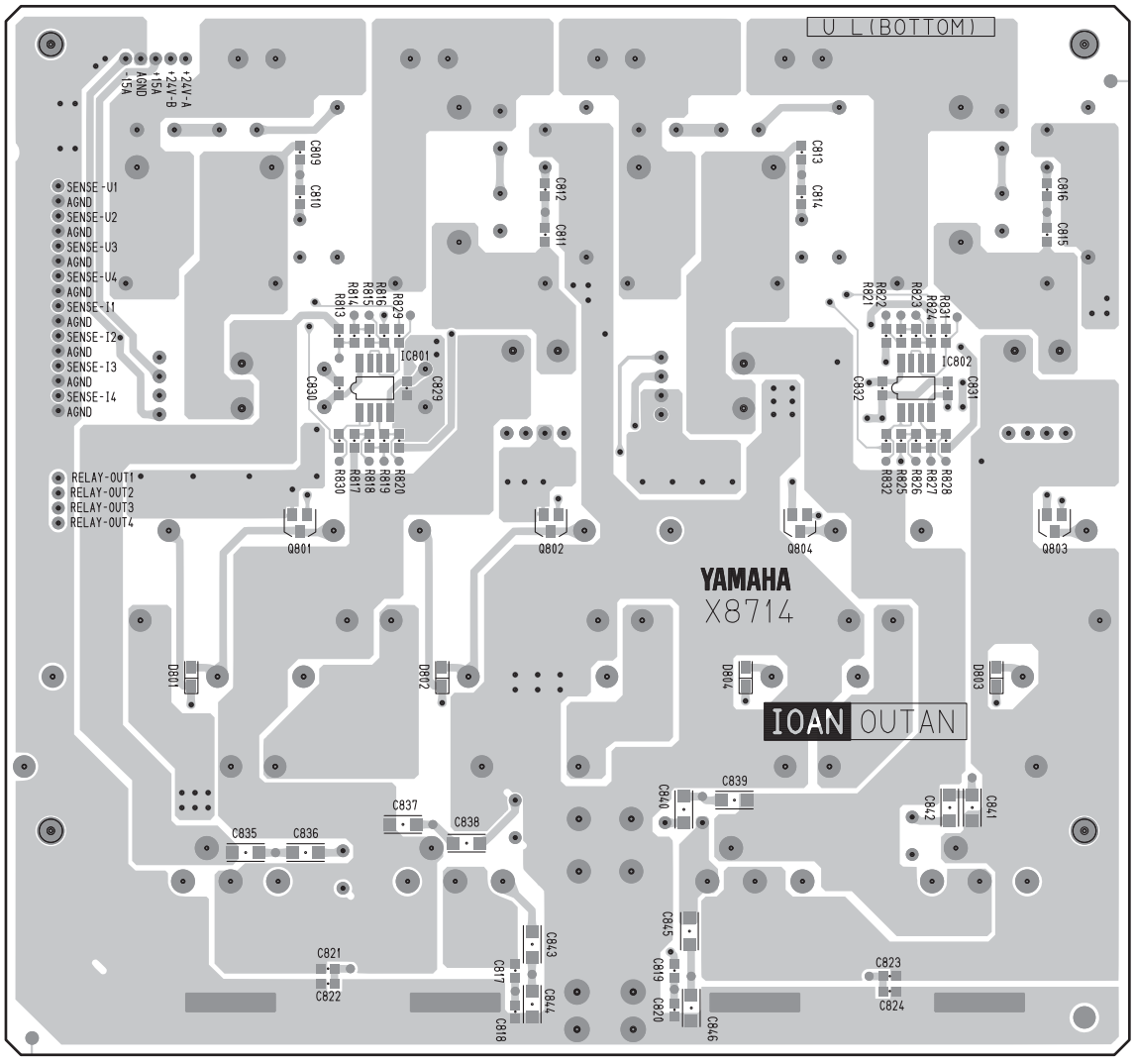

Pattern side（パターン側）

- **OUTANL Circuit Board**



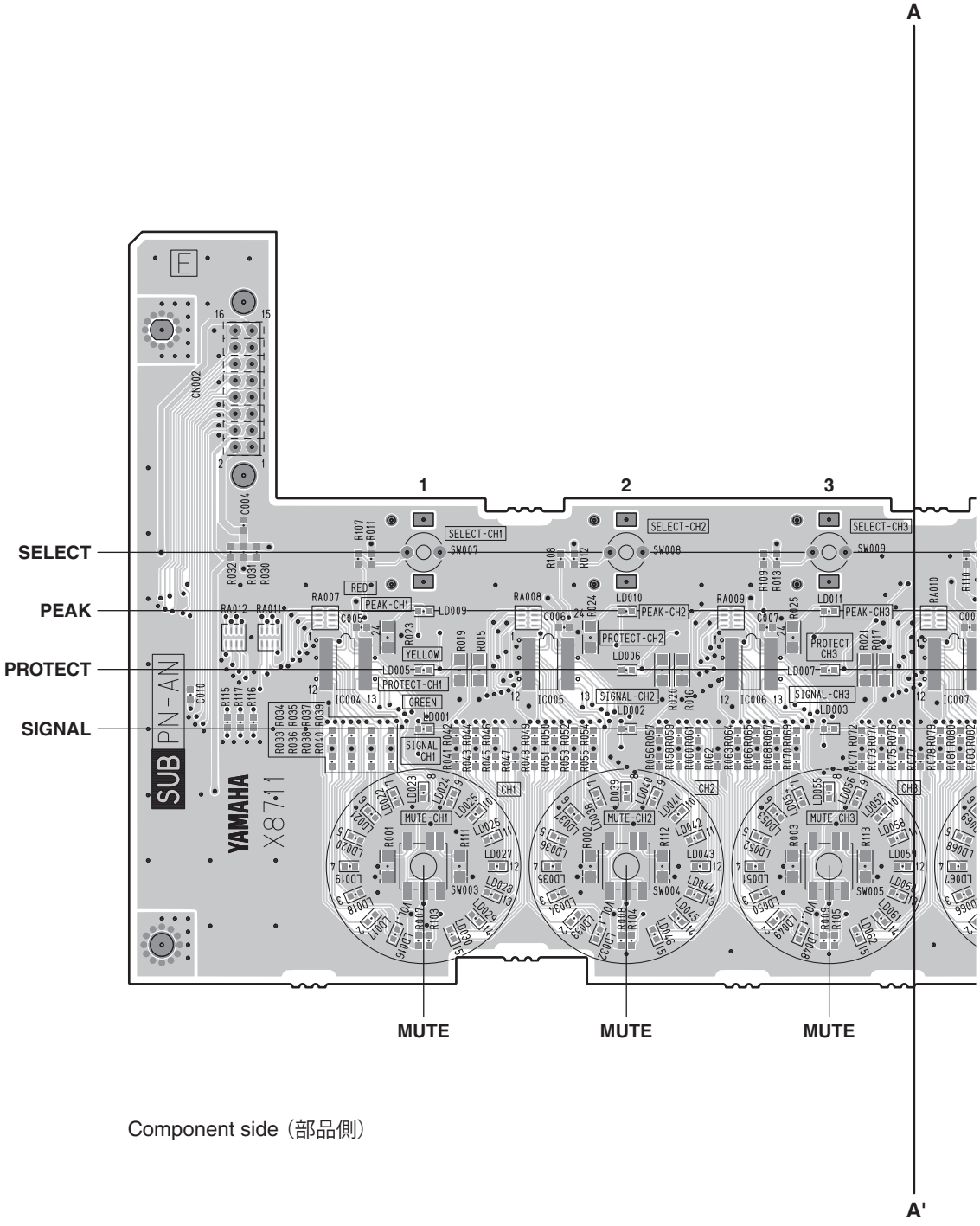

Component side（部品側）

- **OUTANL Circuit Board**



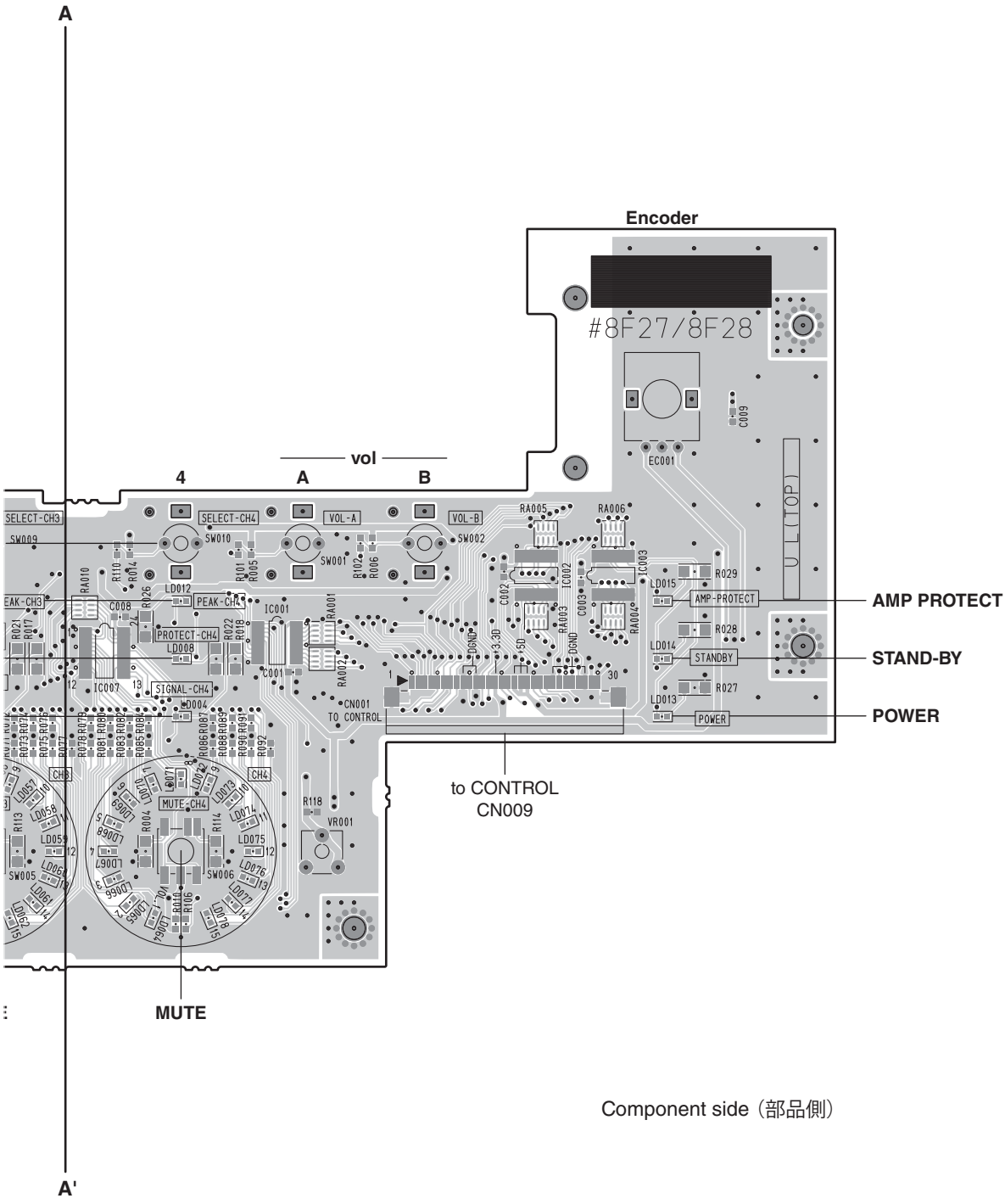

Pattern side（パターン側）

- **PN-AN Circuit Board**

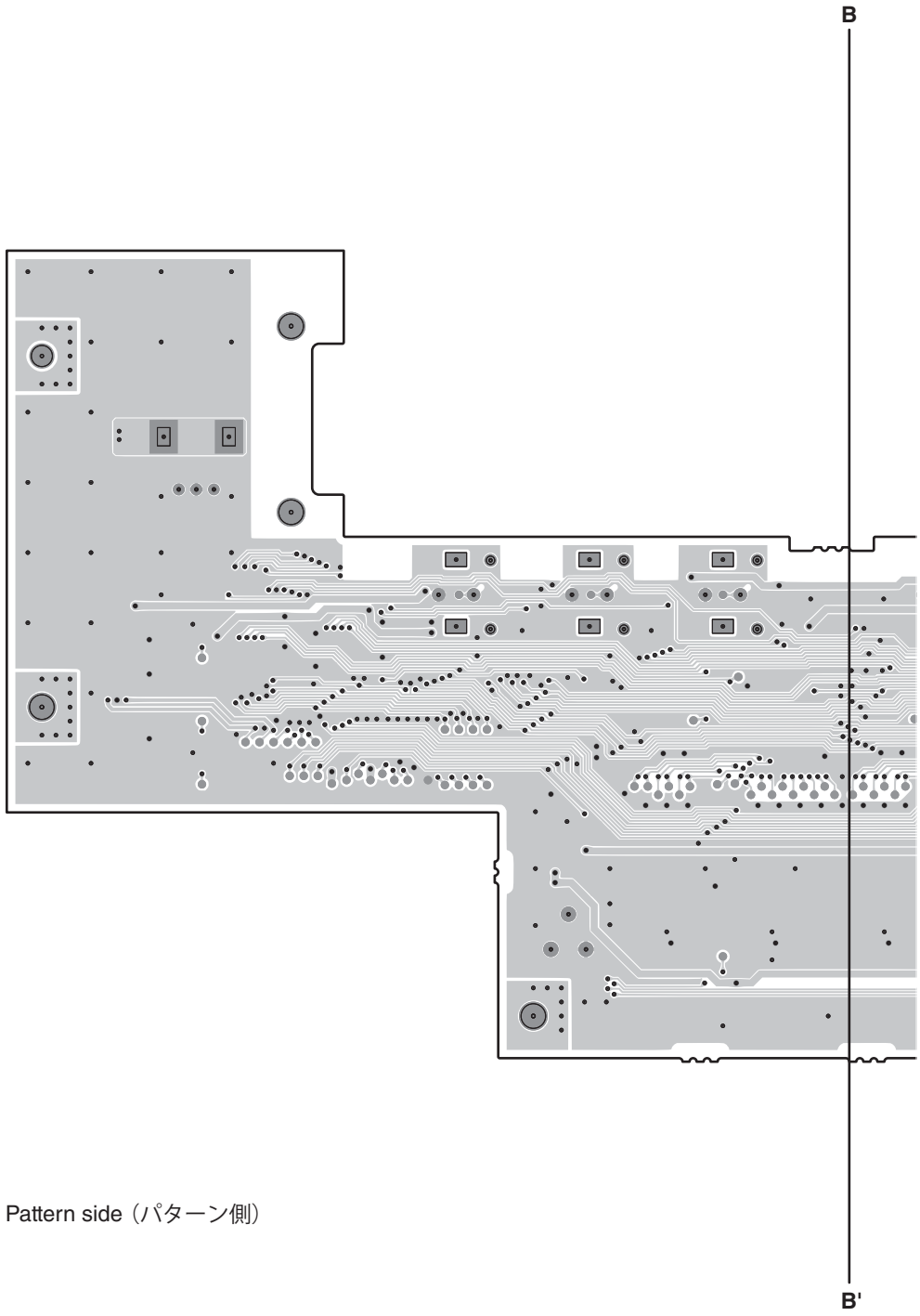



Component side（部品側）

- **PN-AN Circuit Board**



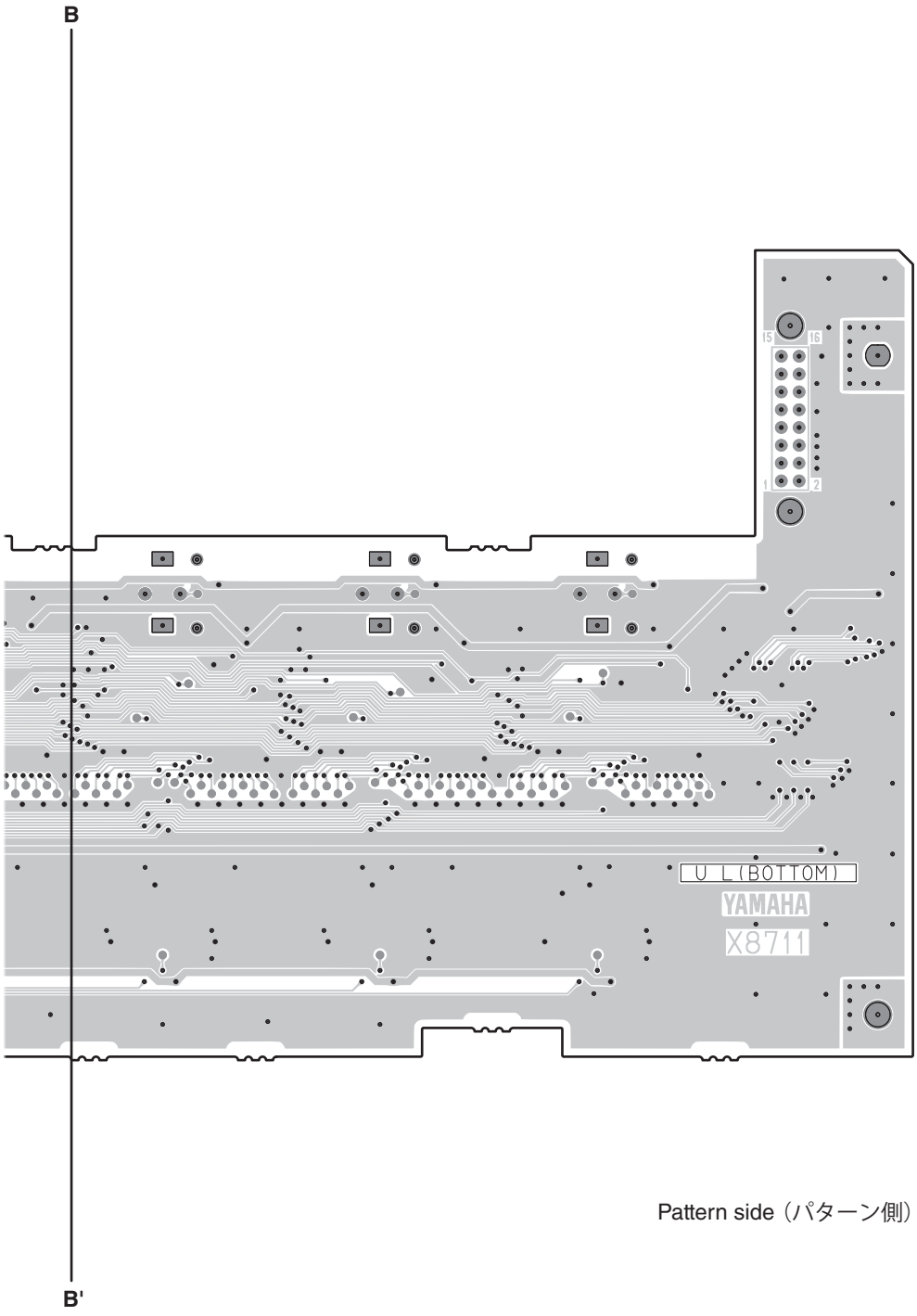
- **PN-AN Circuit Board**




Pattern side（パターン側）

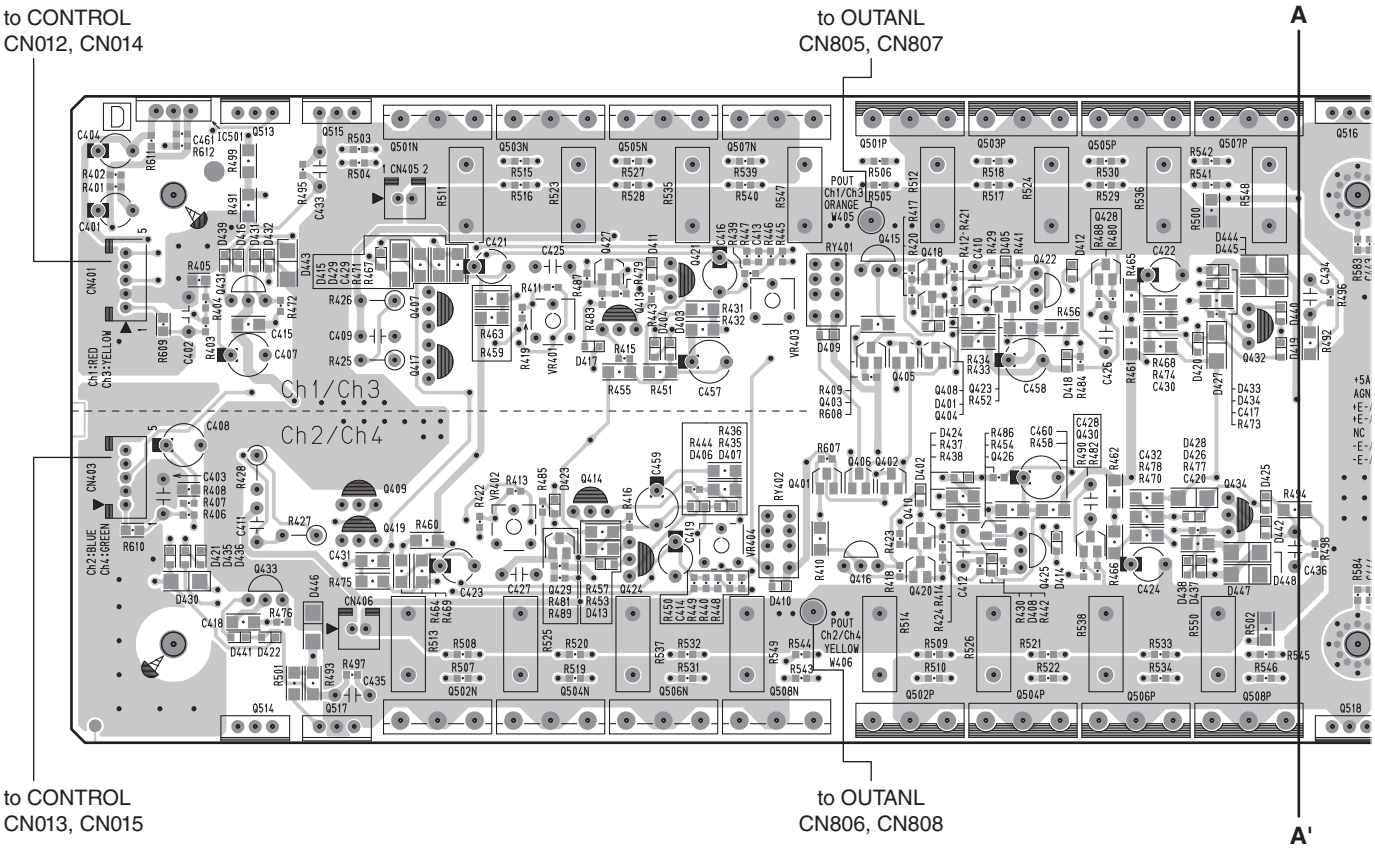
2NA-WJ97170-10 ⚠2

- **PN-AN Circuit Board**

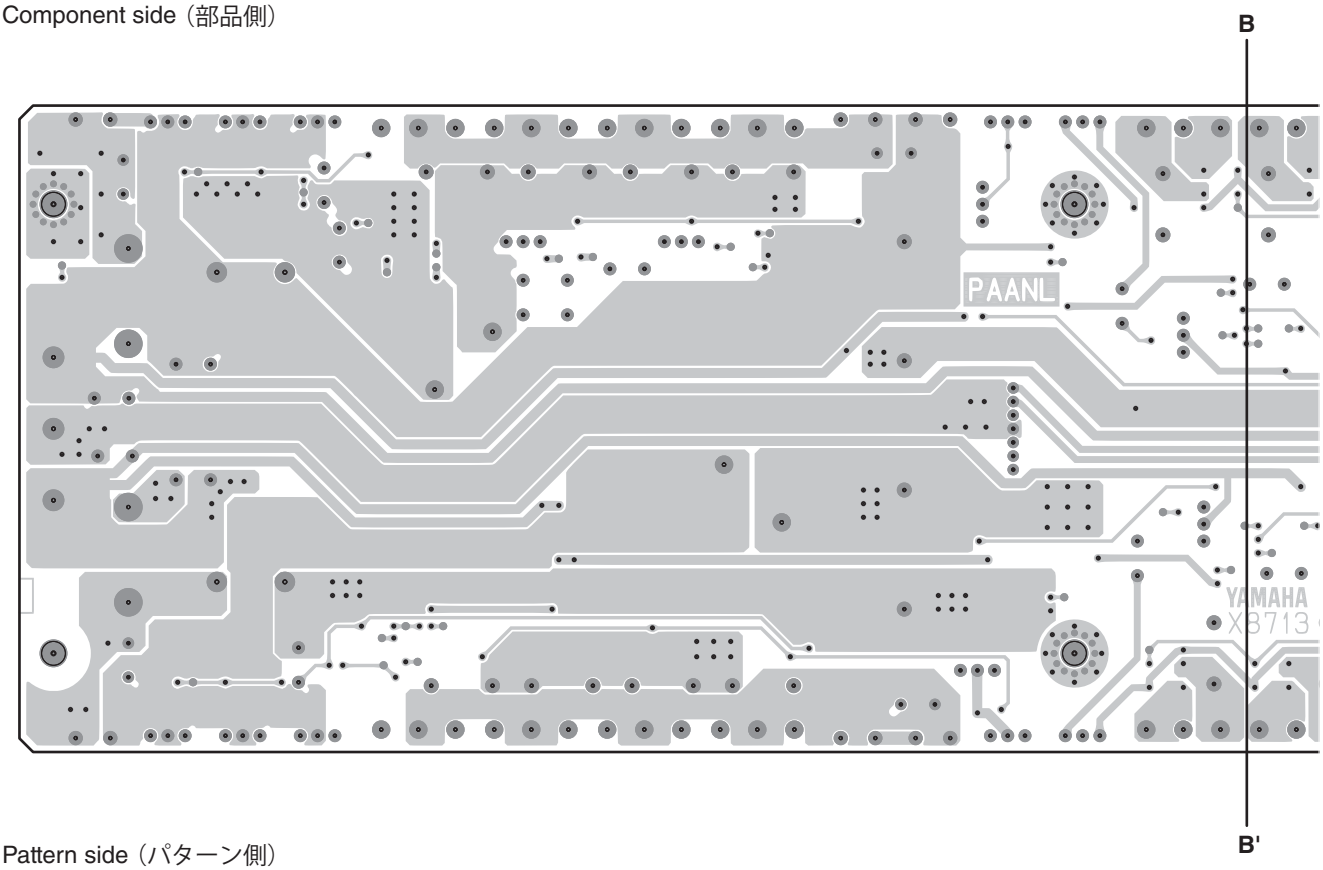



Pattern side（パターン側）

- **PAANL Circuit Board**



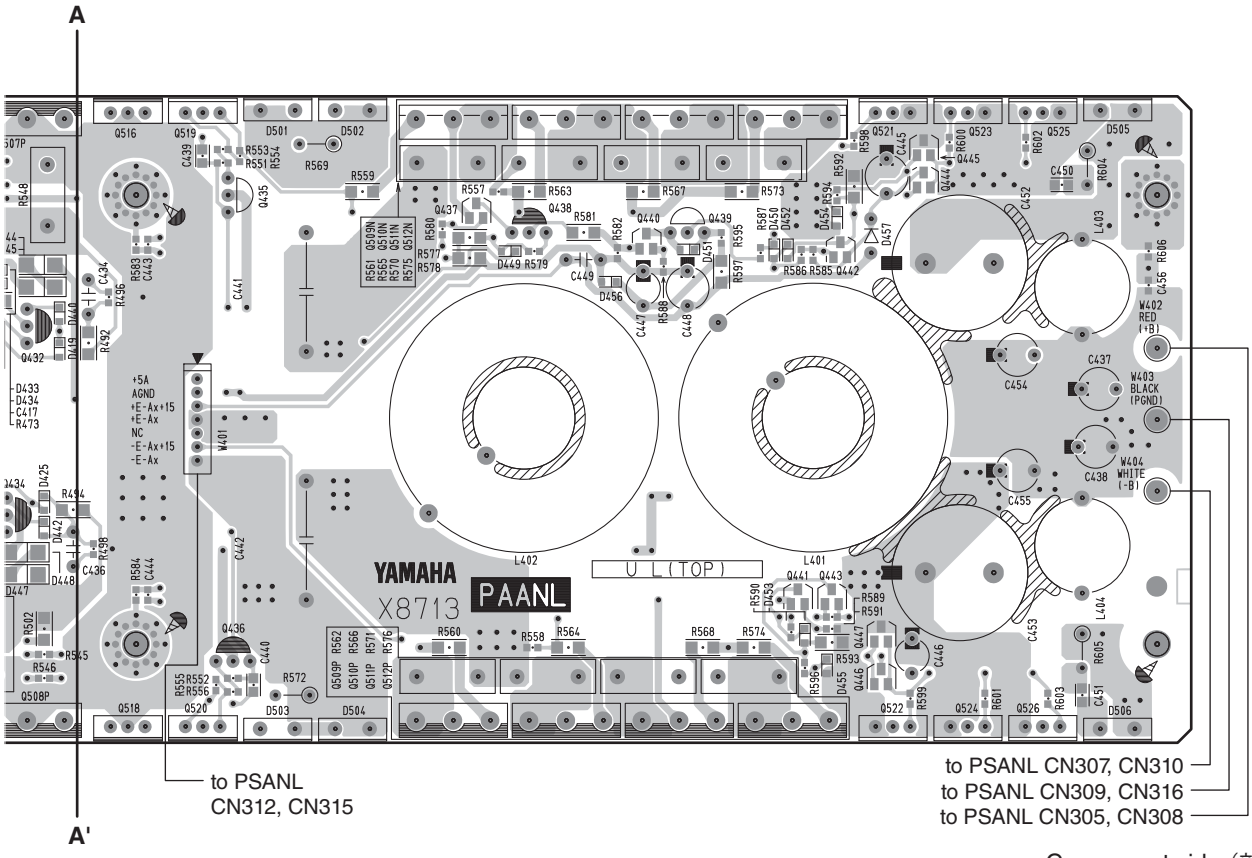

Component side（部品側）



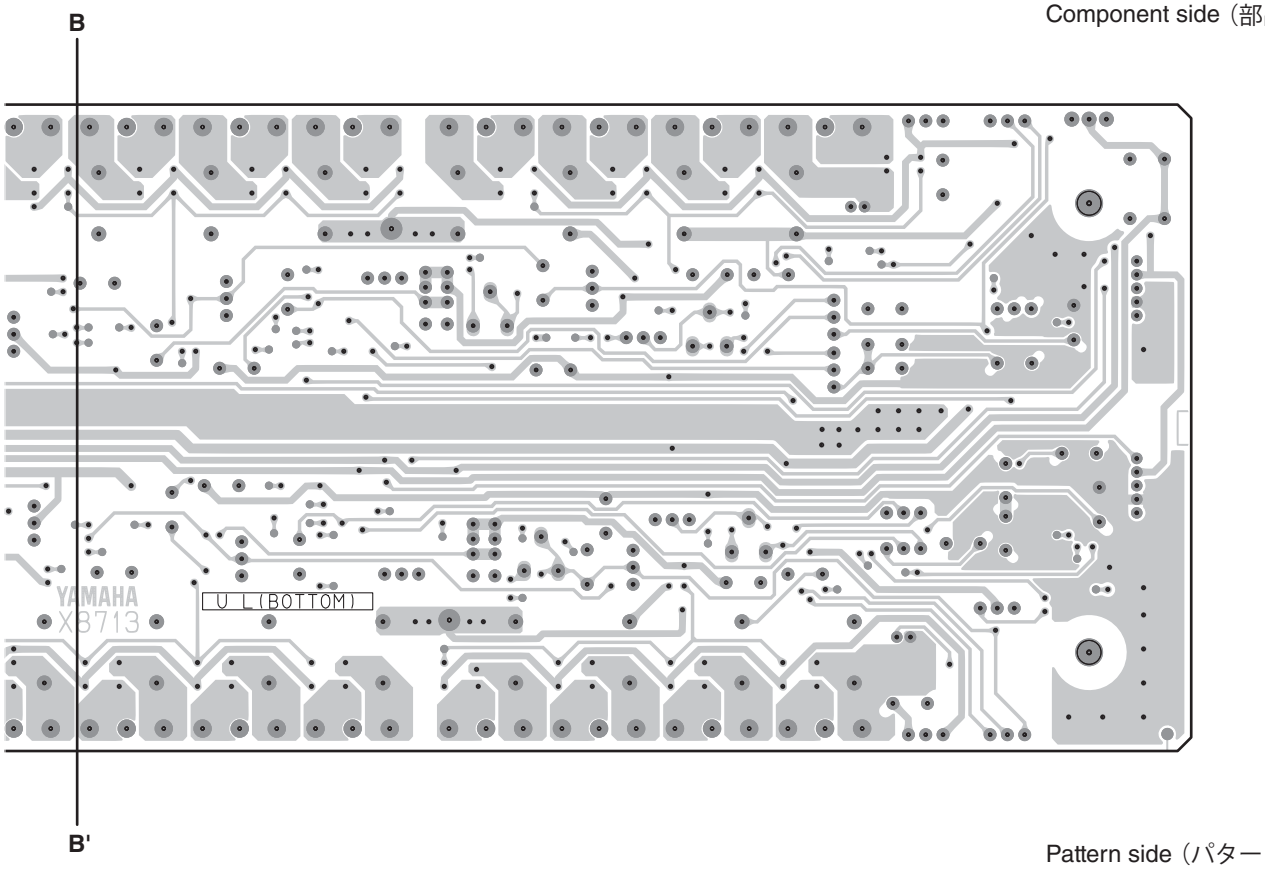

Pattern side（パターン側）

2NA-WJ97310-10 ⚠0

- **PAANL Circuit Board**




Component side（部品側）

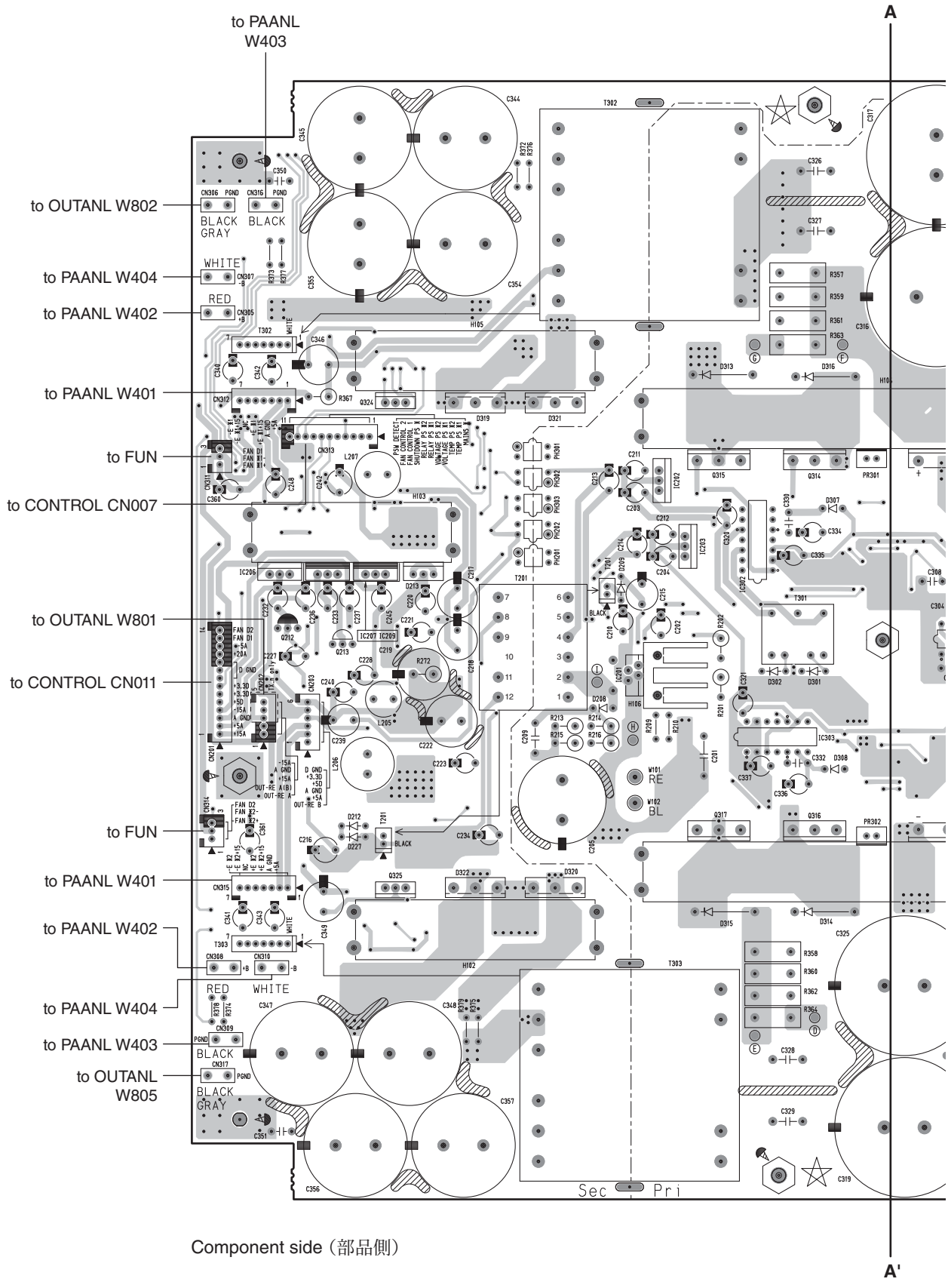



Pattern side（パターン側）

2NA-WJ97310-10 0

- **PSANL Circuit Board**

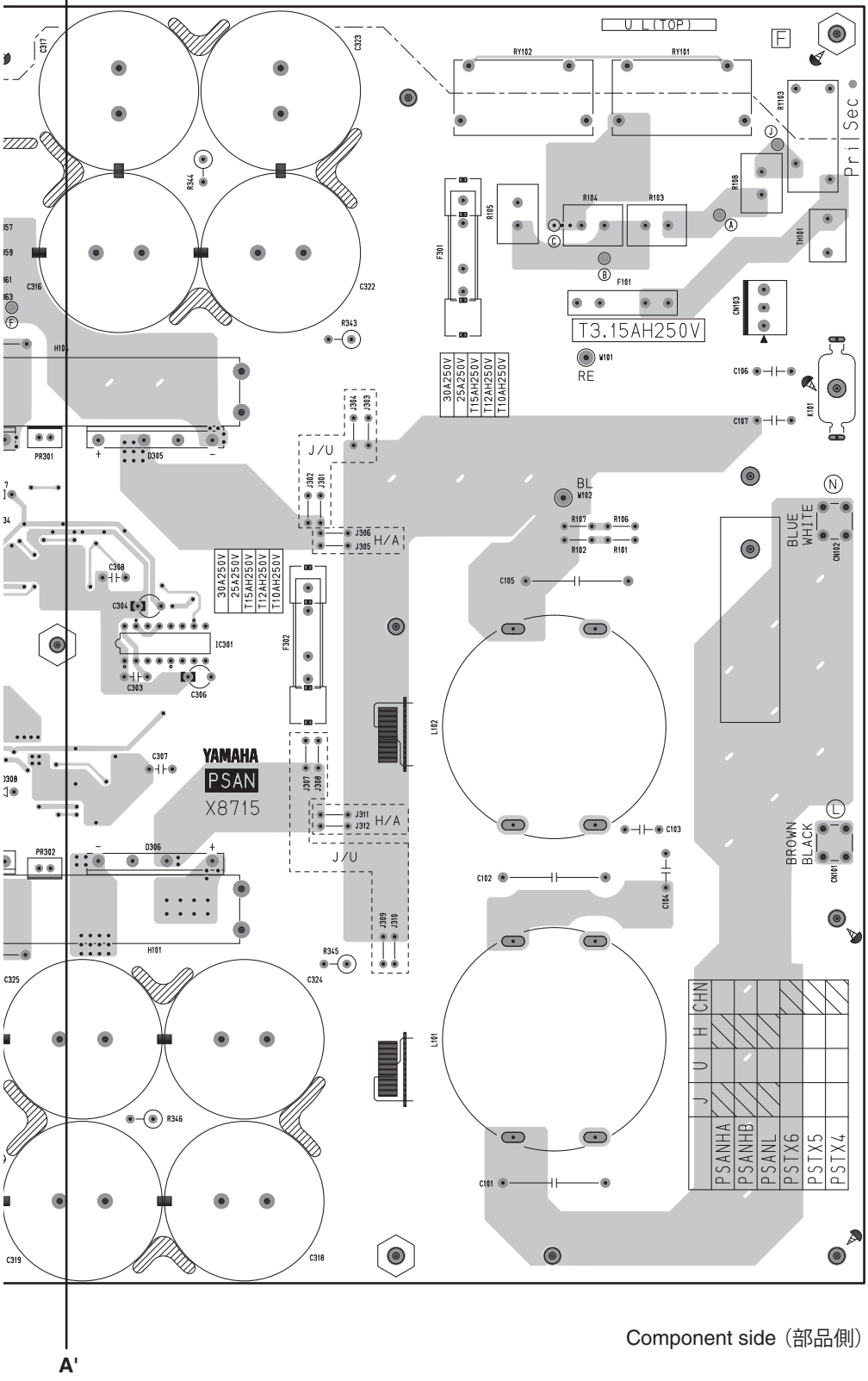
**Reduction: 7/10**




Component side（部品側）

2NA-WJ97410-70 ⚠2

- **PSANL Circuit Board** **Reduction: 7/10**



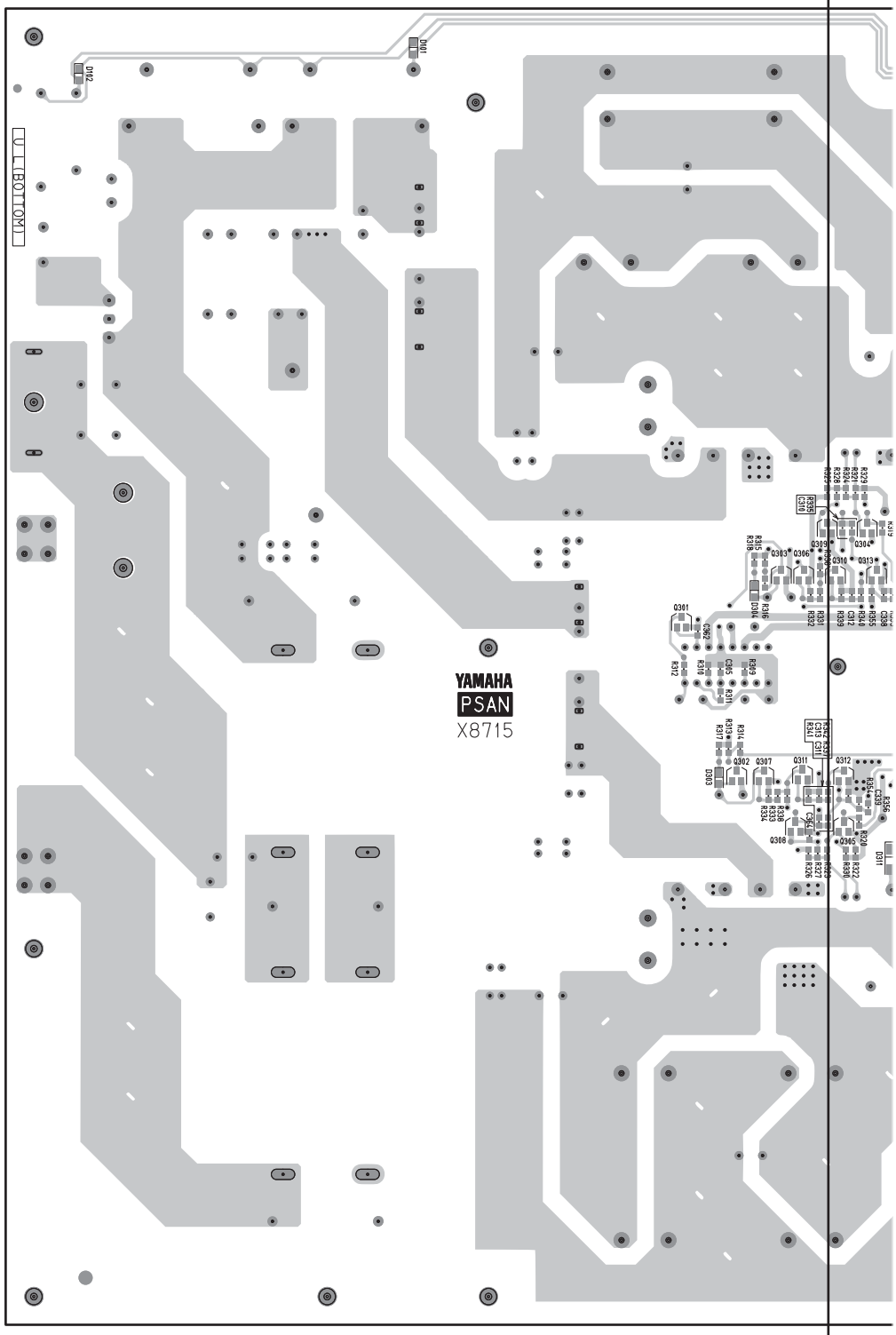

Component side（部品側）

2NA-WJ97410-70 ⚠2

- **PSANL Circuit Board**

**Reduction: 7/10**

B

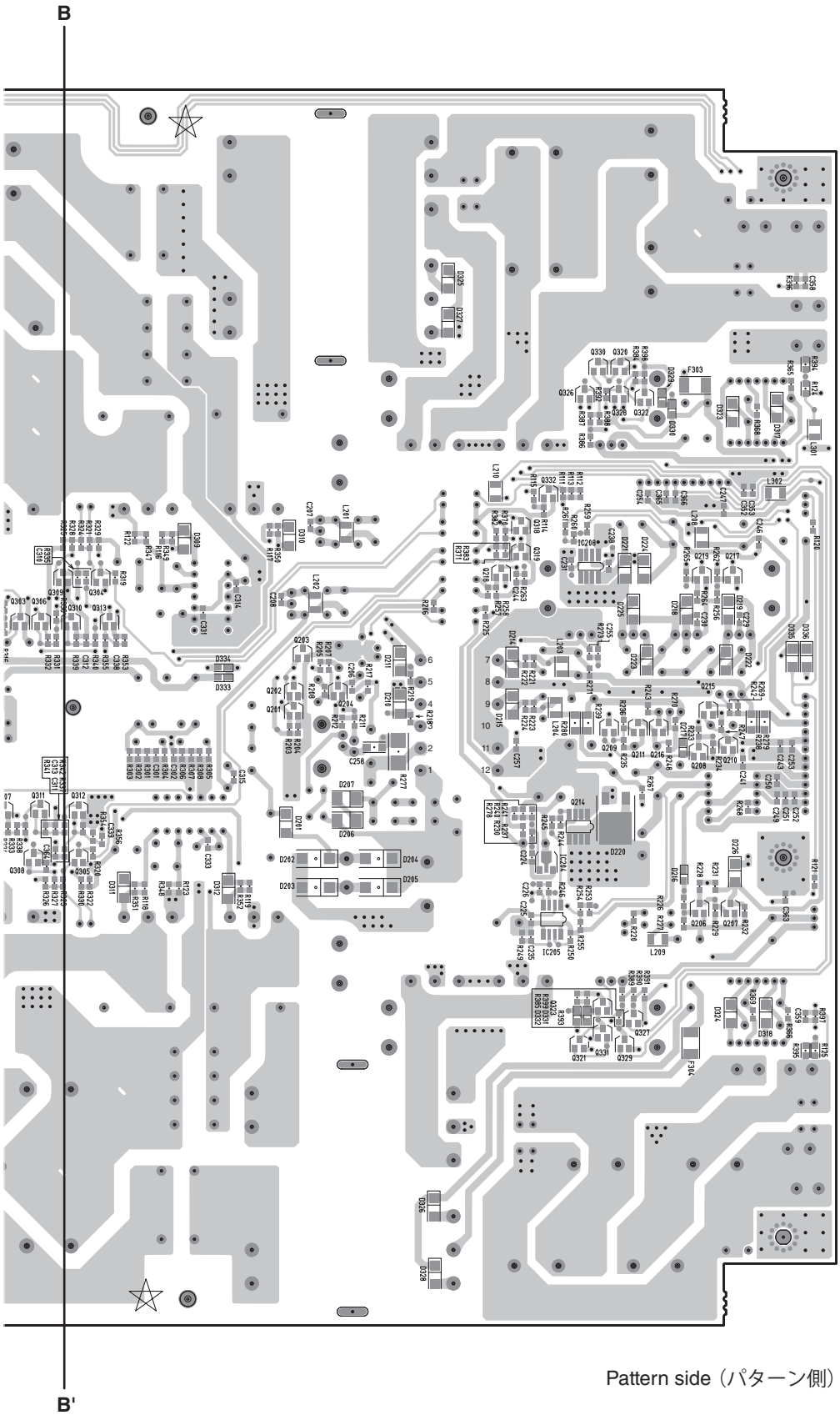



Pattern side（パターン側）

B'

2NA-WJ97410-70 2

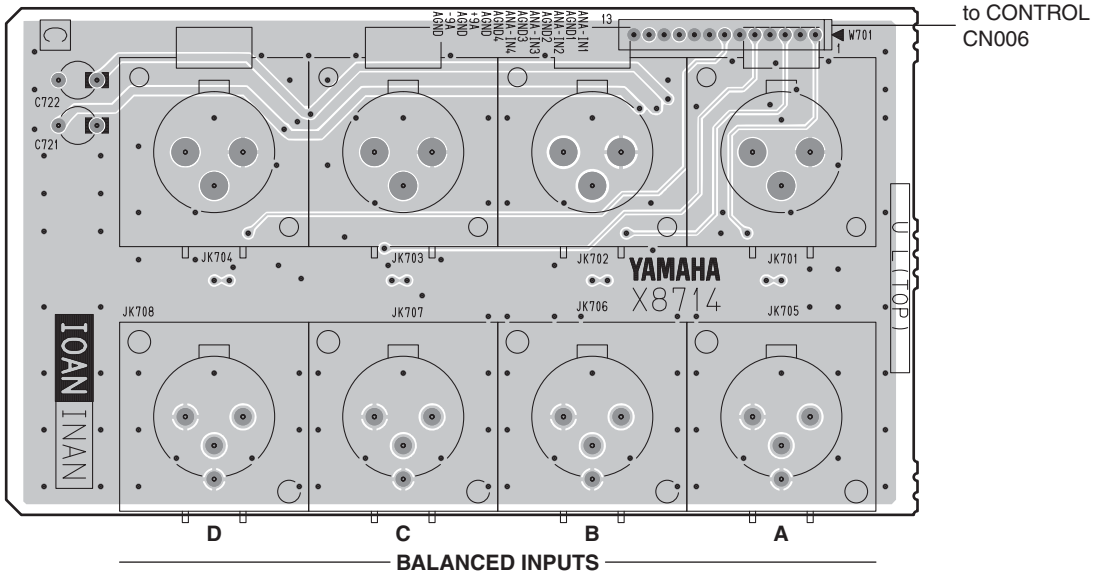
- **PSANL Circuit Board** **Reduction: 7/10**



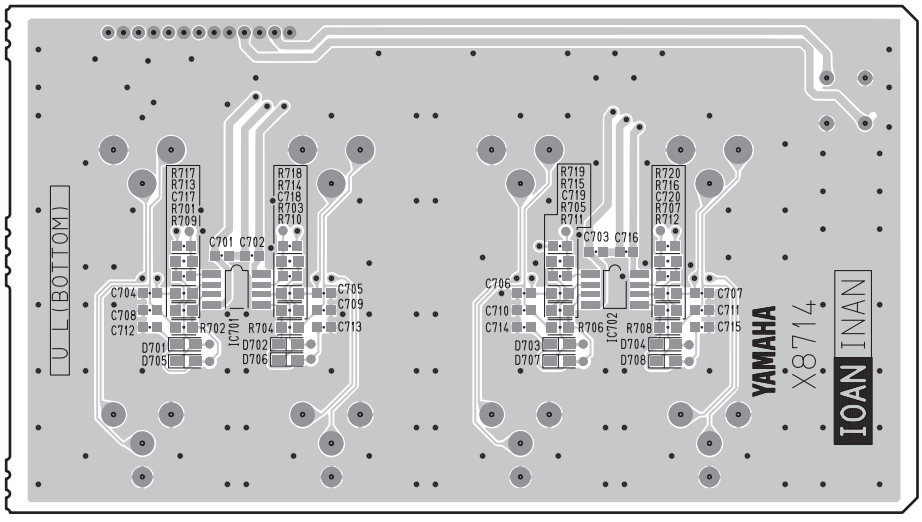

Pattern side（パターン側）

2NA-WJ97410-70 △2

- **INANL Circuit Board**

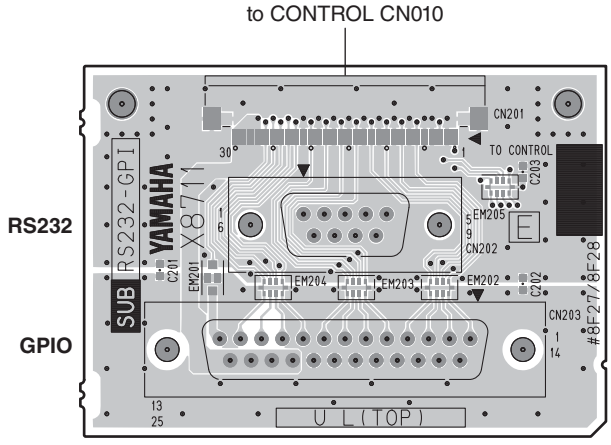



Component side（部品側）

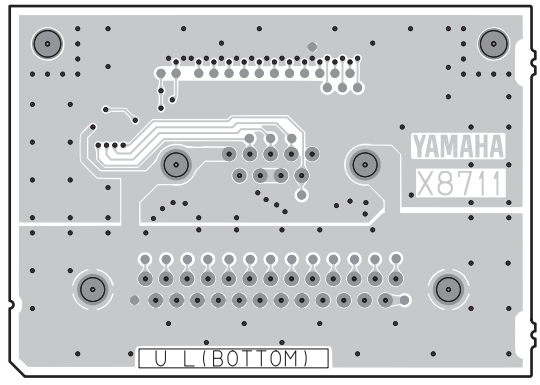



Pattern side（パターン側）

- **RS232-GPI Circuit Board**

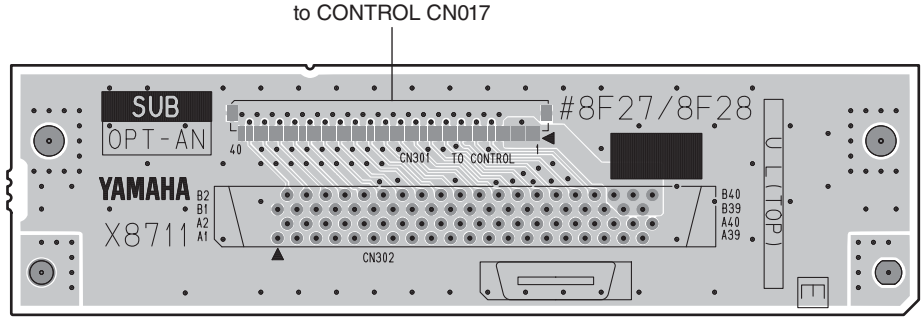



Component side（部品側）



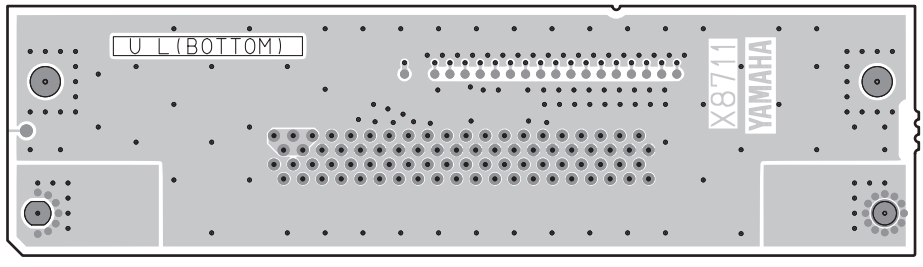

Pattern side（パターン側）

- **OPT-AN Circuit Board**



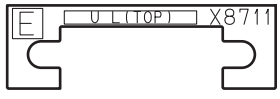

**Expansion slot**

Component side（部品側）

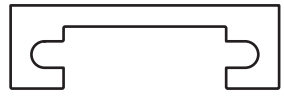



Pattern side（パターン側）

- **LCD SPACER Circuit Board**

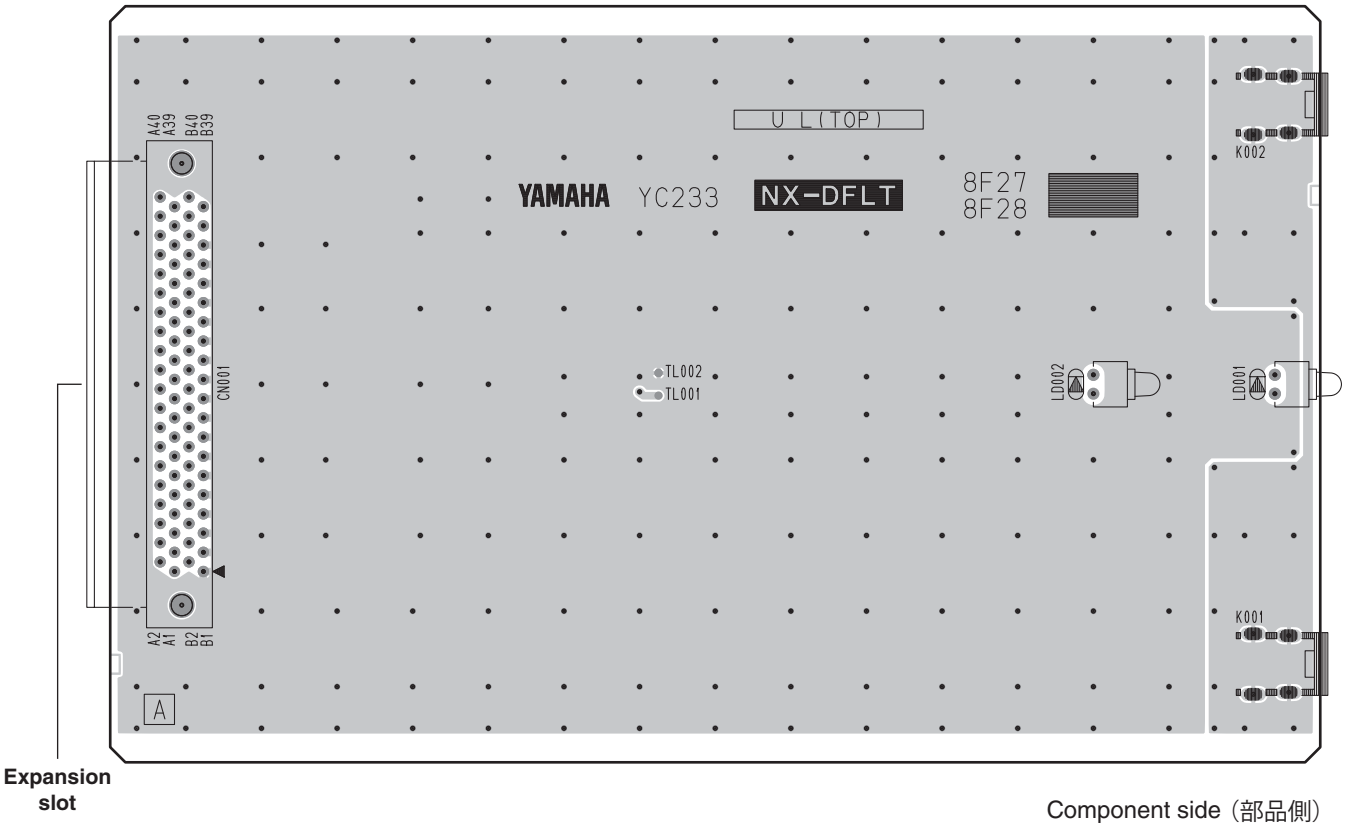



Component side（部品側）



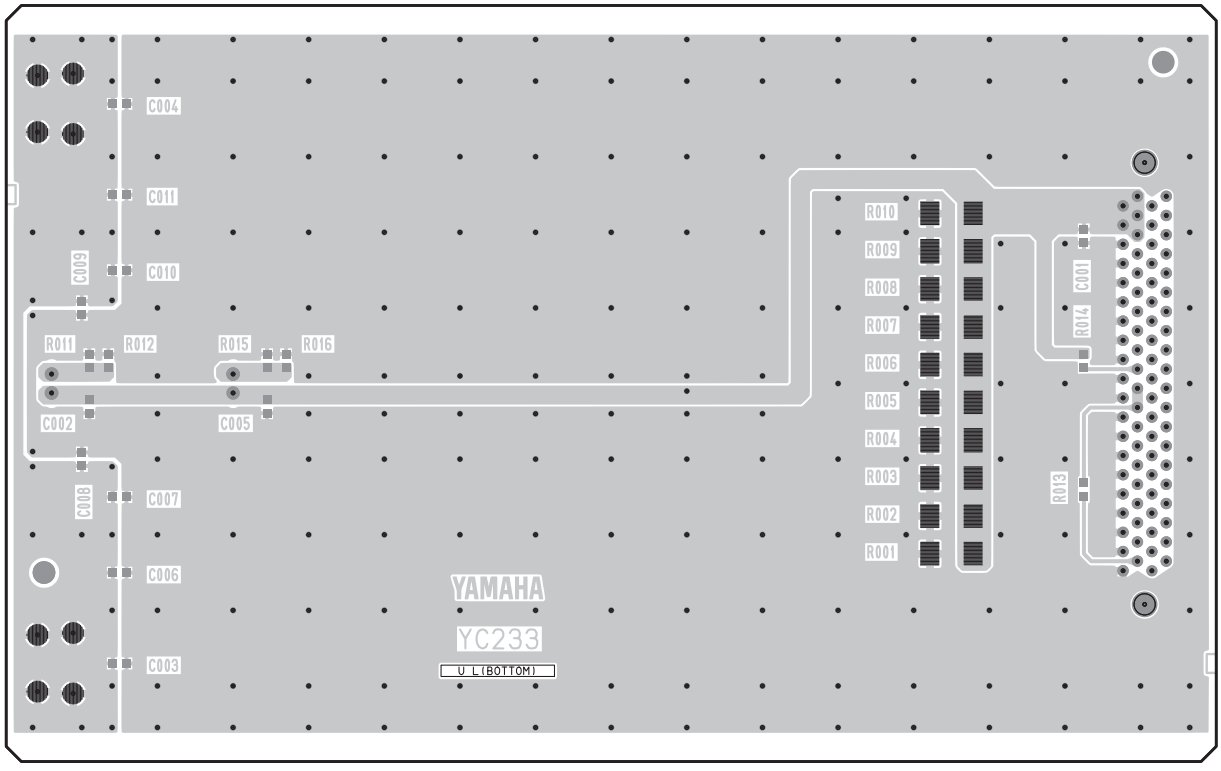
Pattern side（パターン側）

- **NX-DFLT Circuit Board**




**Expansion slot**

Component side（部品側）




Pattern side（パターン側）

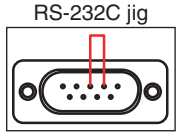
2NA-WT66120-10 ⚠0

# TEST PROGRAM

## 1. Required items

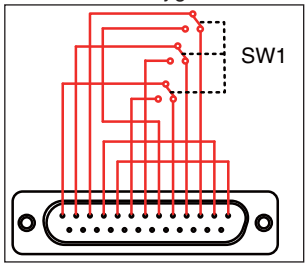
| | |
|---|---|
| Computer | : DOS/V computer x1 (Pentium 200MHz or more, Windows XP, USB Port) |
| Software | : Software for version up (JTAG Programmer) |
| Cable | : RLINK-ST (USB-JTAG adapter) |
| Measuring equipment | : Power consumption meter |
| Tools | : RS-232C jig x1, GPI jig x1, SLOT jig x1 |

RS-232C jig



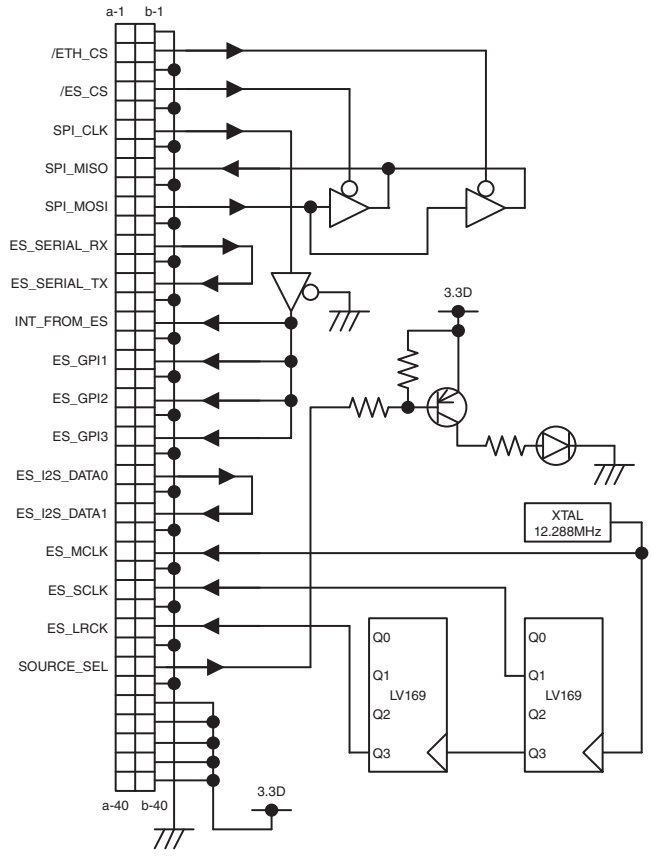
D-SUB 9 pin female connector

GPI jig

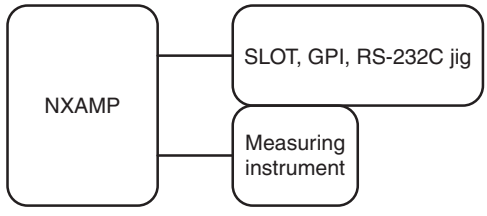



D-SUB 25 pin male connector

SLOT jig




## 2. Test connection image



## 3. Operation

### 3-1. Entry of the test program

While holding down the [SELECT4], [MUTE4] and [A] buttons simultaneously, turn the power switch on. The start up screen appears on the LCD.

Start Up Screen

```
      Boot 1.29
       WAIT...
```

Then release your fingers from the buttons.
The test program starts and the test menu screen appears on the LCD display.

Test Menu Screen

```
00 CHOOSE TEST < >
01 SWITCH
```

### 3-2. Executing the test and judgment display

Select the desired test item from the table below using the rotary encoder, and press the [B] button to start the test.

Test Items List

| | | | |
|---|---|---|---|
| 01 | SWITCH | 11 | FLASH |
| 02 | ENCODER | 12 | FAN |
| 03 | LED | 13 | SLOT |
| 04 | LCD | 14 | ATTENUATION |
| 05 | RS232 | 15 | ANALOG |
| 06 | GPI | 16 | BRIDGE |
| 07 | PORT (no use) | 17 | CALIBRATION |
| 08 | DSP | 18 | STANDBY |
| 09 | WORD CLOCK | 19 | QUIT |
| 10 | 12C | | |

After executing the test, the display returns to the test menu screen if the test result is OK. If an error occurs, “ERROR” appears on the LCD and the test program is stopped. In that case, turn the power switch off and on again as was done above in 3-1.

## 4. Outline of tests

### 4-1. SWITCH test

```
00 CHOOSE TEST < >
01 SWITCH
```

Press the [B] button to start the test. The LCD shows one by one the switch name to be tested as shown below.

```
01 SWITCH
HIT SELECT CH1
```

Press the switch displayed on the LCD as instructed one by one.
If all instructed switches are OK, the display automatically returns to the test menu screen.

### 4-2. ENCODER test

```
00 CHOOSE TEST < >
02 ENCODER
```

Press the [B] button to start the test. The following display appears.

```
02 ENCODER
TURN RIGHT  0
```

Turn the ENCODER knob clockwise. The 2nd line on the display changes as shown below.

TURN RIGHT 0 –> • • • • • –> TURN RIGHT 19

The following display appears after the 2nd line on the display reaches TURN RIGHT 19.

```
02 ENCODER
TURN LEFT  0
```

Turn the ENCODER knob counterclockwise. The 2nd line on the display changes as shown below.

TURN LEFT 0 –> • • • • • –> TURN LEFT 19

The display returns to the test menu screen after the 2nd line on the display reaches TURN LEFT 19.

### 4-3. LED test

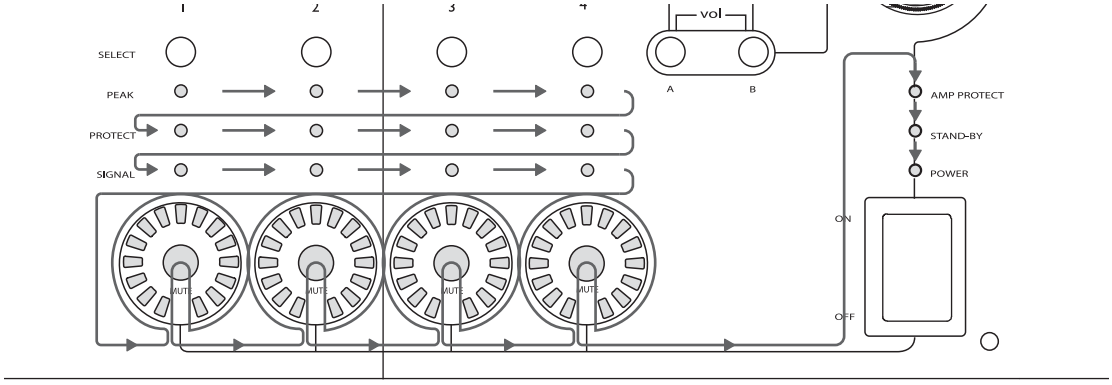
```
00 CHOOSE TEST < >
03 LED
```

Press the [B] button to start the test. The following display appears.

```
03 LED
```

The LEDs automatically light up one by one in a specific order as shown on the next page.
All LEDs will light at the same time after each LED individually has been tested. Confirm that each LED is lit normally. If OK, press the [B] button to return the display to the test menu screen.

**Lighting order**




### 4-4. LCD test

```
00 CHOOSE TEST < >
04 LCD
```

Press the [B] button to start the test.
First the following display appears.

```
04 LCD
```

All the dots of the LCD go on and off two times. Finally, all the dots of the LCD are lit. Confirm that all the dots of the LCD have lit normally. If OK, press the [B] button to return the display to the test menu screen.

### 4-5. RS-232C test

```
00 CHOOSE TEST < >
05 RS-232C
```

Connect the RS-232C jig to the R232C port of this unit.
Press the [B] button to start the test. The following display appears.

```
05 RS-232C
RS-232C OK ?
```

Press the [B] button to continue the test. The test is executed automatically.
After executing the test, the following display appears.
(When an error occurs, “ERROR” appears and the test program is stopped.)

```
05 RS-232C
RELEASE RS-232C
```

Disconnect the RS-232C jig from the RC232C port of this unit. Press the [B] button to return the display to the test menu screen.

### 4-6. GPI test

```
00 CHOOSE TEST < >
06 GPI
```

Connect the GPI jig to the GPIO port of this unit.
Then press the [B] button to start the test. The following display appears.

```
06 GPI
GPO[0:4] TEST OK ?
```

Switch the GPI jig to the GPO [0:4] position and press the [B] button to continue the test.
The test executes automatically.
If normal, the following display appears. (If an error occurs, “ERROR” appears and the test program is stopped.)

```
06 GPI
GPO[5:7] TEST OK ?
```

Switch the GPI jig to the GPO [5:7] position. Press the [B] button to continue the test.
The test executes automatically. If the test result is OK, the display automatically returns to the test menu screen. (If an error occurs, “ERROR” appears and the test program is stopped.)
Disconnect the GPI jig from the GPIO port.

**4-7. PORT test**

Test for factory inspection only.

**4-8. DSP test**

```
00 CHOOSE TEST < >
08 DSP
```

Press the [B] button to start the test. The following display appears.

```
08 DSP
CPU to DSP TEST OK ?
```

Press the [B] button to continue the test. The test executes automatically.
If normal, the following display appears.

```
08 DSP
DSP to DSP TEST OK ?
```

Press the [B] button to continue the test. The test executes automatically.

If the test result is OK, the display automatically returns to the test menu screen.
(If an error occurs, “ERROR” appears and the test program is stopped.)

**4-9. WORD CLOCK test**

```
00 CHOOSE TEST < >
09 WORD CLOCK
```

Press the [B] button to start the test. The following display appears.

```
09 WORD CLOCK
LRCK 48k TEST OK ?
```

Press the [B] button to continue the test. The test executes automatically.
If normal, the following display appears.

```
09 WORD CLOCK
LRCK 96k TEST OK ?
```

Press the [B] button to continue the test. The test executes automatically.

If the test result is OK, the display automatically returns to the test menu screen.
(If an error occurs, “ERROR” appears and the test program is stopped.)

**4-10. 12C test**

```
00 CHOOSE TEST < >
10 12C
```

Press the [B] button to start the test. The following display appears.

```
10 12C
12C TEST OK ?
```

Press the [B] button to continue the test. The test executes automatically.

If the test result is OK, the display automatically returns to the test menu screen.
(If an error occurs, “ERROR” appears and the test program is stopped.)

### 4-11. FLASH test

```
00 CHOOSE TEST < >
11 FLASH
```

Press the [B] button to start the test. The following display appears.

```
11 FLASH
FLASH TEST OK ?
```

Press the [B] button to continue the test. The test executes automatically.

If the test result is OK, the display automatically returns to the test menu screen.
(If an error occurs, “ERROR” appears and the test program is stopped.)

### 4-12. FAN test

```
00 CHOOSE TEST < >
12 FAN
```

Press the [B] button to start the test. The following display appears.
The FAN starts rotating at low speed.

```
12 FAN
LOW
```

Check that the FAN rotates at low speed, and press the [B] button to continue the test. The following display appears, and the FAN rotates at middle speed.

```
12 FAN
MIDD
```

Check that the FAN rotates at middle speed, and press the [B] button to continue the test. The following display appears, and the FAN rotates at high speed.

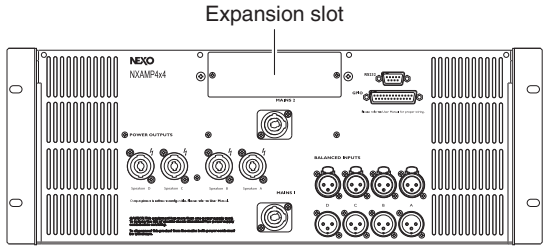
```
12 FAN
HIGH
```

Check that the FAN rotates at high speed, and press the [B] button to return the display to the test menu screen.

### 4-13. SLOT test

```
00 CHOOSE TEST < >
13 SLOT
```

Rear panel




(Turn off the power to this unit, and insert the SLOT jig into the expansion slot. Restart the test program, and select this test.)
Press the [B] button to start the test. The test executes automatically.
If every signal is normal, the following display appears and the LED of the SLOT jig lights.
(If an error occurs, “ERROR” appears and the test program is stopped.)

```
13 SLOT
ANALOG TEST OK ?
```

Input the 1 kHz, -10 ±1 dBu sine wave to the channel 1 input terminal and confirm that the output voltage obtained at the channel 1 output terminal is +24.1 ±2.0 dBu.

If OK, press the [B] button to return the display to the test menu screen.

### 4-14. ATTENUATION test

```
00 CHOOSE TEST < >
14 ATTENUATION
```

Press the [B] button to enter the attenuation test mode. The following display appears.

```
14 ATTENUATION
NOISE TEST OK ?
```

Perform the test according to the “Inspection with attenuation test mode”. (See page 74).
If OK, press the [B] button to return the display to the test menu screen.

### 4-15. ANALOG test

```
00 CHOOSE TEST < >
15 ANALOG
```

Press the [B] button to enter the analog test mode. The following display appears.

```
15 ANALOG
ANALOG TEST OK ?
```

Perform the test according to the “Inspection with analog test mode”. (See page 75–76)
Press the [B] button. The following display appears.

```
15 ANALOG
MUTE TEST OK ?
```

If OK, press the [B] button to return the display to the test menu screen.

### 4-16. BRIDGE test

```
00 CHOOSE TEST < >
16 BRIDGE
```

Press the [B] button to enter the bridge test mode. The following display appears.

```
16 BRIDGE
ANALOG TEST OK ?
```

Perform the test according to the “Inspection with BRIDGE mode”. (See page 77)
If OK, press the [B] button to return the display to the test menu screen.

### 4-17. CALIBRATION

```
00 CHOOSE TEST < >
17 CALIBRATION
```

Press the [B] button to start the calibration. The following display appears.

```
17 CALIBRATION
CH1 INPUT SIGNAL OK ?
```

Input the 1 kHz, +10 dBu sine wave to the channel 1 input terminal, and press the [B] button. The analog input level is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH2 INPUT SIGNAL OK ?
```

Input the 1 kHz, +10 dBu sine wave to the channel 2 input terminal, and press the [B] button. The analog input level is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH3 INPUT SIGNAL OK ?
```

Input the 1 kHz, +10 dBu sine wave to the channel 3 input terminal, and press the [B] button. The analog input level is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH4 INPUT SIGNAL OK ?
```

Input the 1 kHz, +10 dBu sine wave to the channel 4 input terminal, and press the [B] button. The analog input level is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH1 SET TO 38.1 dBu ?
```

Input the 1 kHz, +10 dBu sine wave to the channel 1 input terminal.
Adjust the ENCODER so that the output voltage obtained at the channel 1 output terminal is +38.1 dBu, and press the [B] button.
The analog output level is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH2 SET TO 38.1 dBu ?
```

Input the 1 kHz, +10 dBu sine wave to the channel 2 input terminal.
Adjust the ENCODER so that the output voltage obtained at the channel 2 output terminal is +38.1 dBu, and press the [B] button.
The analog output level is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH3 SET TO 38.1 dBu ?
```

Input the 1 kHz, +10 dBu sine wave to the channel 3 input terminal.
Adjust the ENCODER so that the output voltage obtained at the channel 3 output terminal is +38.1 dBu, and press the [B] button.
The analog output level is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH4 SET TO 38.1 dBu ?
```

Input the 1 kHz, +10 dBu sine wave to the channel 4 input terminal.
Adjust the ENCODER so that the output voltage obtained at the channel 4 output terminal is +38.1 dBu, and press the [B] button.
The analog output level is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH1 OUTPUT SIGNAL OK ?
```

Adjust the input signal voltage so that the output voltage obtained at the channel 1 output terminal is 40 Vrms (= +34.3 dBu), and press the [B] button.
The output voltage monitor is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH2 OUTPUT SIGNAL OK ?
```

Adjust the input signal voltage so that the output voltage obtained at the channel 2 output terminal is 40 Vrms (= +34.3 dBu), and press the [B] button.
The output voltage monitor is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH3 OUTPUT SIGNAL OK ?
```

Adjust the input signal voltage so that the output voltage obtained at the channel 3 output terminal is 40 Vrms (= +34.3 dBu), and press the [B] button.
The output voltage monitor is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH4 OUTPUT SIGNAL OK ?
```

Adjust the input signal voltage so that the output voltage obtained at the channel 4 output terminal is 40 Vrms (= +34.3 dBu), and press the [B] button.
The output voltage monitor is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH1 CONNECT 8 OHM LOAD
```

Connect the 8 Ω resistor to the channel 1 output terminal.
Adjust the input signal voltage so that the output voltage obtained at the channel 1 output terminal is 40 Vrms (= +34.3 dBu), and press the [B] button.
The output current monitor is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH2 CONNECT 8 OHM LOAD
```

Connect the 8 Ω resistor to the channel 2 output terminal.
Adjust the input signal voltage so that the output voltage obtained at the channel 2 output terminal is 40 Vrms (= +34.3 dBu), and press the [B] button.
The output current monitor is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH3 CONNECT 8 OHM LOAD
```

Connect the 8 Ω resistor to the channel 3 output terminal.
Adjust the input signal voltage so that the output voltage obtained at the channel 3 output terminal is 40 Vrms (= +34.3 dBu), and press the [B] button.
The output current monitor is automatically calibrated, and the following display appears.

```
17 CALIBRATION
CH4 CONNECT 8 OHM LOAD
```

Connect the 8 Ω resistor to the channel 4 output terminal.
Adjust the input signal voltage so that the output voltage obtained at the channel 4 output terminal is 40 Vrms (= +34.3 dBu), and press the [B] button.
The output current monitor is automatically calibrated, and the display returns to the test menu screen.
(If an error occurs, “ERROR” appears and the test program is stopped.)

**4-18. STANDBY test**

```
00 CHOOSE TEST < >
18 STANDBY
```

Press the [B] button to enter the standby mode. The following display appears.

```
18 STANDBY
```

Measure the primary power consumption, and check that the measured value is 23 W or less. Press the [B] button for one second or more, and the display returns to the test menu screen.

**4-19. QUIT (Exit the test program)**

```
00 CHOOSE TEST < >
19 QUIT
```

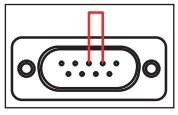
Press the [B] button to exit the test program. This unit enters the ordinary mode.

# ■ テストプログラム

## 1. 必要なもの

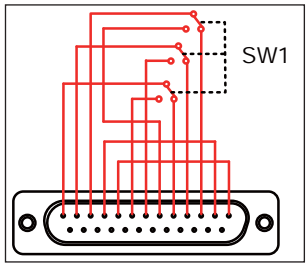
| | |
|---|---|
| パソコン | : DOS/V パソコン（Pentium 200MHz 以上、Windows XP、USB ポート） |
| ソフトウェア | : バージョンアップ用ソフトウェア （JTAG Programmer） |
| ケーブル | : RLINK-ST（USB-JTAG アダプター） |
| 測定器 | : 消費電力計 |
| 冶具 | : RS-232C 冶具 x 1、GPI 冶具 x 1、SLOT 冶具 x 1 |

RS-232C 冶具



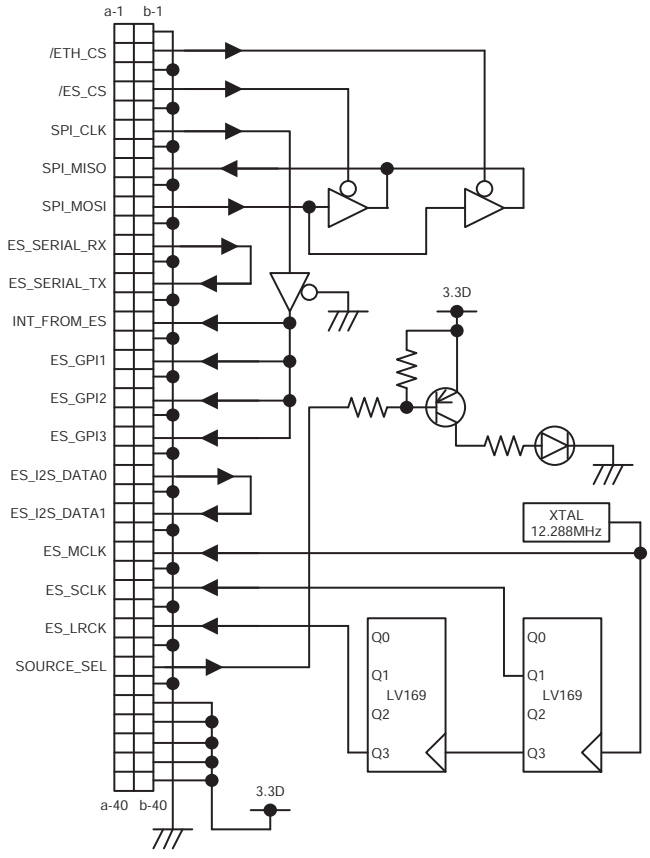
D-SUB 9 ピンメスコネクター

GPI 冶具

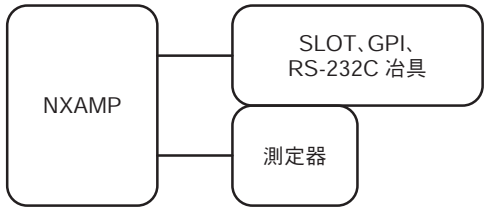



D-SUB 9 ピンオスコネクター

スロット冶具




## 2. 接続イメージ



## 3. 操作

### 3-1. テストプログラムの起動

［SELECT4］ボタン、［MUTE4］ボタン、［A］ボタンを同時に押しながら電源スイッチを ON にします。LCD に起動画面が表示されます。

起動画面

```
      Boot 1.29
       WAIT...
```

［SELECT4］ボタン、［MUTE4］ボタン、［A］ボタンを離します。テストプログラムが起動し、検査メニュー画面が表示されます。

検査メニュー画面

```
00 CHOOSE TEST < >
01 SWITCH
```

### 3-2. 検査の実行と検査結果の表示

ロータリーエンコーダーで下記の表から検査項目を選び、［B］ボタンを押して検査を行います。

検査項目選択リスト

| | | | |
|---|---|---|---|
| 01 | SWITCH | 11 | FLASH |
| 02 | ENCODER | 12 | FAN |
| 03 | LED | 13 | SLOT |
| 04 | LCD | 14 | ATTENUATION |
| 05 | RS232 | 15 | ANALOG |
| 06 | GPI | 16 | BRIDGE |
| 07 | PORT (no use) | 17 | CALIBRATION |
| 08 | DSP | 18 | STANDBY |
| 09 | WORD CLOCK | 19 | QUIT |
| 10 | 12C | | |

検査後、検査結果が OK のとき、表示は検査メニュー画面に戻ります。
エラーが発生した場合､LCD に「ERROR」が表示され、テストプログラムが停止します。
その場合、電源スイッチを一度 OFF にした後、3-1 の方法でテストプログラムを再起動します。

## 4. 検査の概要

### 4-1. スイッチ入力検査

```
00 CHOOSE TEST < >
01 SWITCH
```

［B］ボタンを押して検査をスタートします。
検査するスイッチの名称が 1 つ 1 つ下記のように LCD に表示されます。

```
01 SWITCH
HIT SELECT CH1
```

LCD にその名前が表示されたスイッチを 1 つ 1 つ押します。
全スイッチが OK であれば、表示は自動的に検査メニュー画面に戻ります。

### 4-2. エンコーダー検査

```
00 CHOOSE TEST < >
02 ENCODER
```

［B］ボタンを押して検査をスタートします。下記の画面が表示されます。

```
02 ENCODER
TURN RIGHT  0
```

エンコーダーツマミを時計方向に回します。2 行目の表示が下記のように変化します。

TURN RIGHT 0 –> • • • • • –> TURN RIGHT 19

2 行目の表示が「TURN RIGHT 19」になった後、下記のように表示されます。

```
02 ENCODER
TURN LEFT  0
```

エンコーダーツマミを反時計方向に回します。2 行目の表示が下記のように変化します。

TURN LEFT 0 –> • • • • • –> TURN LEFT 19

2 行目の表示が「TURN LEFT 19」になった後、表示は自動的に検査メニュー画面に戻ります。

### 4-3. LED 検査

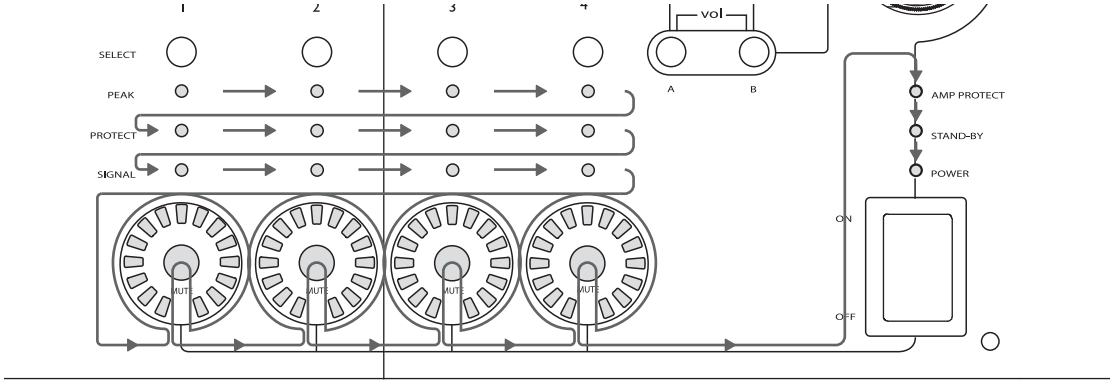
```
00 CHOOSE TEST < >
03 LED
```

［B］ボタンを押して検査をスタートします。 下記の画面が表示されます。

```
03 LED
```

LED が、次ページに示す順番で 1 つ 1 つ自動的に点灯します。
各 LED の検査後、全 LED が同時に点灯します。各 LED が正常に点灯していることを確認します。
OK であれば、［B］ボタンを押して表示を検査メニュー画面に戻します。

**点灯順**




### 4-4. LCD 検査

```
00 CHOOSE TEST < >
04 LCD
```

[B] ボタンを押して検査をスタートします。
最初に下記の画面が表示されます。

```
04 LCD
```

LCD の全ドットが、点灯／消灯を 2 回繰り返します。
最後に全ドットが点灯します。全ドットが正常に点灯していることを確認します。
OK であれば、[B] ボタンを押して表示を検査メニュー画面に戻します。

### 4-5. RS-232C 検査

```
00 CHOOSE TEST < >
05 RS-232C
```

本機の RS232C ポートに RS-232C 冶具を接続します。
[B] ボタンを押して検査をスタートします。下記の画面が表示されます。

```
05 RS-232C
RS-232C OK ?
```

[B] ボタンを押して検査を継続します。検査が自動的に実施されます。
検査実施後、下記の画面が表示されます。
（エラーが発生した場合、「ERROR」が表示され、テストプログラムが停止します。）

```
05 RS-232C
RELEASE RS-232C
```

本機の RS232C ポートから RS-232C 冶具を外します。
[B] ボタンを押して表示を検査メニュー画面に戻します。

### 4-6. GPI 検査

```
00 CHOOSE TEST < >
06 GPI
```

本機の GPIO ポートに GPI 冶具を接続します。
[B] ボタンを押して検査をスタートします。下記の画面が表示されます。

```
06 GPI
GPO[0:4] TEST OK ?
```

GPI 冶具を GPO [0:4] ポジションに切り替えて、[B] ボタンを押して検査を継続します。
検査が自動的に実施されます。
正常であれば、下記の画面が表示されます。（エラーが発生した場合、「ERROR」が表示され、テストプログラムが停止します。）

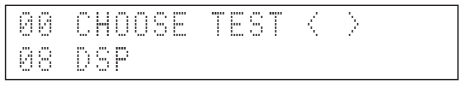
```
06 GPI
GPO[5:7] TEST OK ?
```

GPI 治具を GPO［5:7］ポジションに切り替えて、［B］ボタンを押して検査を継続します。
検査が自動的に実施されます。
正常であれば､表示が検査メニュー画面に戻ります。（エラーが発生した場合、「ERROR」が表示され、テストプログラムが停止します。）
GPIO ポートから GPI 治具を外します。

**4-7. ポート検査**

工場検査専用

**4-8. DSP 検査**




［B］ボタンを押して検査をスタートします。下記の画面が表示されます。

［B］ボタンを押して検査を継続します。検査が自動的に実施されます。
正常であれば、下記の画面が表示されます。

［B］ボタンを押して検査を継続します。検査が自動的に実施されます。

検査結果が OK であれば、表示が検査メニュー画面に戻ります。
（エラーが発生した場合、「ERROR」が表示され、テストプログラムが停止します。）

**4-9. WORD CLOCK 検査**

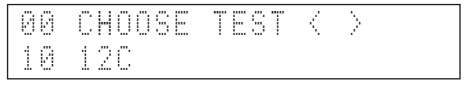
［B］ボタンを押して検査をスタートします。下記の画面が表示されます。

［B］ボタンを押して検査を継続します。検査が自動的に実施されます。
正常であれば、下記の画面が表示されます。

［B］ボタンを押して検査を継続します。検査が自動的に実施されます。

検査結果が OK であれば、表示が検査メニュー画面に戻ります。
（エラーが発生した場合、「ERROR」が表示され、テストプログラムが停止します。）

**4-10. 12C 検査**




［B］ボタンを押して検査をスタートします。下記の画面が表示されます。

［B］ボタンを押して検査を継続します。検査が自動的に実施されます。

検査結果が OK であれば、表示が検査メニュー画面に戻ります。
（エラーが発生した場合、「ERROR」が表示され、テストプログラムが停止します。）

### 4-11. FLASH 検査

```
00 CHOOSE TEST < >
11 FLASH
```

[B] ボタンを押して検査をスタートします。下記の画面が表示されます。

```
11 FLASH
FLASH TEST OK ?
```

[B] ボタンを押して検査を継続します。検査が自動的に実施されます。

検査結果が OK であれば、表示が検査メニュー画面に戻ります。
(エラーが発生した場合、「ERROR」が表示され、テストプログラムが停止します。)

### 4-12. FAN 検査

```
00 CHOOSE TEST < >
12 FAN
```

[B] ボタンを押して検査をスタートします。下記の画面が表示されます。
ファンが低速で回転します。

```
12 FAN
LOW
```

ファンが低速で回転することを確認し、[B] ボタンを押して検査を継続します。
下記の画面が表示され、ファンが中速で回転します。

```
12 FAN
MIDD
```

ファンが中速で回転することを確認し、[B] ボタンを押して検査を継続します。
下記の画面が表示され、ファンが高速で回転します。

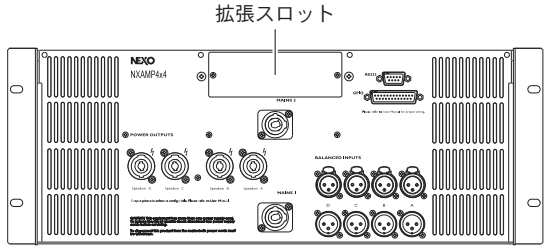
```
12 FAN
HIGH
```

ファンが高速で回転することを確認し、[B] ボタンを押して表示を検査メニュー画面に戻します。

### 4-13. SLOT 検査

```
00 CHOOSE TEST < >
13 SLOT
```

リアパネル




(本機の電源を切り、拡張スロットに SLOT 冶具を挿入します。テストプログラムを再起動し、このテストを選びます。)
[B] ボタンを押して検査をスタートします。検査が自動的に実施されます。
全ての信号が正常であれば、下記の画面が表示され、スロット冶具の LED が点灯します。
(エラーが発生した場合、「ERROR」が表示され、テストプログラムが停止します。)

```
13 SLOT
ANALOG TEST OK ?
```

チャンネル 1 の入力端子に 1 kHz、-10 ±1 dBu の正弦波を入力し、チャンネル 1 の出力端子に +24.1 ±2.0 dBu の出力が得られることを確認します。

OK であれば、[B] ボタンを押して表示を検査メニュー画面に戻します。

### 4-14. ATTENUATION 検査

```
00 CHOOSE TEST < >
14 ATTENUATION
```

[B] ボタンを押して ATTENUATION 検査モードに入ります。
下記の画面が表示されます。

```
14 ATTENUATION
NOISE TEST OK ?
```

「アッテネーション検査モードでの検査」にしたがって検査を行います。(79 ページ参照)
OK であれば、[B] ボタンを押して表示を検査メニュー画面に戻します。

### 4-15. ANALOG 検査

```
00 CHOOSE TEST < >
15 ANALOG
```

[B] ボタンを押してアナログ検査モードに入ります。下記の画面が表示されます。

```
15 ANALOG
ANALOG TEST OK ?
```

「アナログ検査モードでの検査」にしたがって検査を行います。(80、81 ページ参照)
[B] ボタンを押します。下記の画面が表示されます。

```
15 ANALOG
MUTE TEST OK ?
```

OK であれば、[B] ボタンを押して表示を検査メニュー画面に戻します。

### 4-16. BRIDGE 検査

```
00 CHOOSE TEST < >
16 BRIDGE
```

[B] ボタンを押してブリッジ検査モードに入ります。下記の画面が表示されます。

```
16 BRIDGE
ANALOG TEST OK ?
```

「ブリッジ検査モードでの検査」にしたがって検査を行います。(82 ページ参照)
OK であれば、[B] ボタンを押して表示を検査メニュー画面に戻します。

### 4-17. キャリブレーション

```
00 CHOOSE TEST < >
17 CALIBRATION
```

[B] ボタンを押してキャリブレーションをスタートします。下記の画面が表示されます。

```
17 CALIBRATION
CH1 INPUT SIGNAL OK ?
```

チャンネル 1 の入力端子に 1 kHz、+10 dBu の正弦波を入力し、[B] ボタンを押します。アナログ入力レベルが自動的にキャリブレーションされ、下記の画面が表示されます。

```
17 CALIBRATION
CH2 INPUT SIGNAL OK ?
```

チャンネル 2 の入力端子に 1 kHz、+10 dBu の正弦波を入力し、[B] ボタンを押します。アナログ入力レベルが自動的にキャリブレーションされ、下記の画面が表示されます。

```
17 CALIBRATION
CH3 INPUT SIGNAL OK ?
```

チャンネル 3 の入力端子に 1 kHz、+10 dBu の正弦波を入力し、[B] ボタンを押します。アナログ入力レベルが自動的にキャリブレーションされ、下記の画面が表示されます。

```
17 CALIBRATION
CH4 INPUT SIGNAL OK ?
```

チャンネル 4 の入力端子に 1 kHz、+10 dBu の正弦波を入力し、[B] ボタンを押します。アナログ入力レベルが自動的にキャリブレーションされ、下記の画面が表示されます。

```
17 CALIBRATION
CH1 SET TO 38.1 dBu ?
```

チャンネル 1 の入力端子に 1 kHz、+10 dBu の正弦波を入力します。
チャンネル 1 の出力端子の出力電圧が +38.1 dBu になるようにエンコーダーで調整し、[B] ボタンを押します。アナログ出力レベルが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH2 SET TO 38.1 dBu ?
```

チャンネル 2 の入力端子に 1 kHz、+10 dBu の正弦波を入力します。
チャンネル 2 の出力端子の出力電圧が +38.1 dBu になるようにエンコーダーで調整し、[B] ボタンを押します。アナログ出力レベルが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH3 SET TO 38.1 dBu ?
```

チャンネル 3 の入力端子に 1 kHz、+10 dBu の正弦波を入力します。
チャンネル 3 の出力端子の出力電圧が +38.1 dBu になるようにエンコーダーで調整し、[B] ボタンを押します。アナログ出力レベルが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH4 SET TO 38.1 dBu ?
```

チャンネル 4 の入力端子に 1 kHz、+10 dBu の正弦波を入力します。
チャンネル 4 の出力端子の出力電圧が +38.1 dBu になるようにエンコーダーで調整し、[B] ボタンを押します。
アナログ出力レベルが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH1 OUTPUT SIGNAL OK ?
```

チャンネル 1 の出力端子に 40 Vrms（= +34.3 dBu）の出力を得るように入力信号レベルを調整し、[B] ボタンを押します。
出力電圧モニターが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH2 OUTPUT SIGNAL OK ?
```

チャンネル 2 の出力端子に 40 Vrms（= +34.3 dBu）の出力を得るように入力信号レベルを調整し、[B] ボタンを押します。
出力電圧モニターが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH3 OUTPUT SIGNAL OK ?
```

チャンネル 3 の出力端子に 40 Vrms（= +34.3 dBu）の出力を得るように入力信号レベルを調整し、[B] ボタンを押します。
出力電圧モニターが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH4 OUTPUT SIGNAL OK ?
```

チャンネル 4 の出力端子に 40 Vrms（= +34.3 dBu）の出力を得るように入力信号レベルを調整し、[B] ボタンを押します。
出力電圧モニターが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH1 CONNECT 8 OHM LOAD
```

チャンネル 1 の出力端子に 8 Ωの負荷抵抗を接続します。
チャンネル 1 の出力端子に 40 Vrms（= +34.3 dBu）の出力を得るように入力信号レベルを調整し、[B] ボタンを押します。
出力電流モニターが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH2 CONNECT 8 OHM LOAD
```

チャンネル 2 の出力端子に 8 Ωの負荷抵抗を接続します。
チャンネル 2 の出力端子に 40 Vrms（= +34.3 dBu）の出力を得るように入力信号レベルを調整し、[B] ボタンを押します。
出力電流モニターが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH3 CONNECT 8 OHM LOAD
```

チャンネル 3 の出力端子に 8 Ωの負荷抵抗を接続します。
チャンネル 3 の出力端子に 40 Vrms（= +34.3 dBu）の出力を得るように入力信号レベルを調整し、[B] ボタンを押します。
出力電流モニターが自動的にキャリブレーションされ、下記のように表示されます。

```
17 CALIBRATION
CH4 CONNECT 8 OHM LOAD
```

チャンネル 4 の出力端子に 8 Ωの負荷抵抗を接続します。
チャンネル 4 の出力端子に 40 Vrms（= +34.3 dBu）の出力を得るように入力信号レベルを調整し、[B] ボタンを押します。
出力電流モニターが自動的にキャリブレーションされ、下記のように表示されます。
（エラーが発生した場合、「ERROR」が表示され、テストプログラムが停止します。）

### 4-18. STANDBY 検査

```
00 CHOOSE TEST < >
18 STANDBY
```

[B] ボタンを押してスタンバイモードに入ります。下記のように表示されます。

```
18 STANDBY
```

1 次側の消費電力が 23 W 以下であることを確認します。
[B] ボタンを 1 秒以上押すと、表示が検査メニュー画面に戻ります。

### 4-19. QUIT（テストプログラム終了）

```
00 CHOOSE TEST < >
19 QUIT
```

[B] ボタンを押してテストプログラムを終了します。
本機は通常モードに戻ります。

# ■ INSPECTIONS

## 1. Measurement Conditions

### 1-1. Environment

- Normal temperature: From 10 ˚C to 35 ˚C
- Normal humidity: From 45 % to 85 %

### 1-2. Power Source

- When measuring the electrical characteristics, set the power supply voltage and frequency as specified in the table below.

| Destination | Power supply voltage | Frequency |
|---|---|---|
| U | 120 V +2/-0 % | 60 Hz |
| CHN | 230 V +2/-0 % | 50 Hz |

### 1-3. Measuring Instruments

- Use a reliable measuring device capable of precisely measuring the specification values indicated in this document.
- Input impedance of the measuring instrument should be more than 1 MΩ.
- The noise level should be measured with a 22 Hz-22 kHz band pass filter.
  When you use the Audio Analyzer System made by Audio Precision, Inc. for noise measurement, set the filter characteristics as follows.
  BW : 22 Hz-22 kHz
  Filter (Fltr) : None

### 1-4. Connections

Each input and output terminal of channels 1-4 are as shown in the figure below.

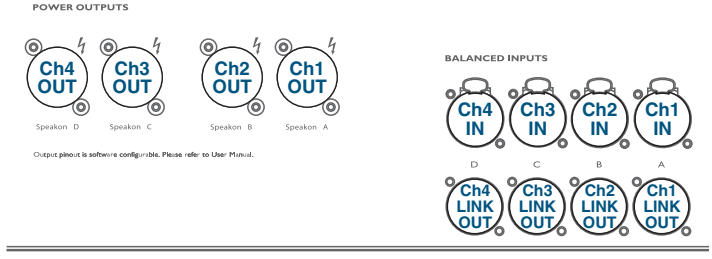



**Fig. 1**

#### 1-4-1. Input connector

XLR-3-31 (female) type connectors are used for input terminals in channels 1-4.
Condition : Balanced input
Wiring : pin 1 to ground, pin 2 to hot (+), pin 3 to cold (-)

#### 1-4-2. Output connector

Neutrik SPEAKON connectors are used for output terminals in channels 1-4.
Connect a load resistor between pin 1+ and pin 1- of the Neutrik SPEAKON connector.

#### 1-4-3. Load resistor

Use a load resistor with no inductivity and a power rating high enough to perform each test safely.

#### 1-4-4. Link out connectors

XLR-3-32 (male) type connectors are used for input terminals in channels 1-4.
Condition : Balanced output
Wiring : pin 1 to ground, pin 2 to hot (+), pin 3 to cold (-)

### 1-5. Other

0 dBu is defined as 0.775 Vrms in these inspections.

## 2. Inspection with ordinary mode

**Condition:**

- Ground each input terminal via a 600 Ω resistance.
- Do not connect the load resistance to the output terminal.

### 2-1. Power ON sequence

1) Turn the power switch on. Confirm that the latest firmware version appears on the LCD display.

Example of firmware version 1.00

```
-- [v 1.00] --
 (c) NEXO 2007.
```

2) Confirm that all the fans start rotation at low speed within 4 seconds after turning the power switch on.
3) Confirm that the following display appears on the LCD within 18 ±3 seconds after turning the power switch on. Also confirm that the POWER LED and only one of the VOLUME LEDs for each channel light up.

```
 -20.0   -20.0   -20.0   -20.0  Vol(dB)
[MAIN  ][MAIN  ][SUB   ][SUB   ] <    >
```

### 2-2. Power consumption when idling

Measure the primary power consumption and confirm that the measured value is 70 ±20 W.

### 2-3. Output terminal DC voltage

Measure the DC voltage (Vdc) of each output terminal and confirm that the measured value is Vdc = 0 ±50 mV.

### 2-4. PEAK indicator

Set this unit to GAIN: 0 dB, VOL: 0 dB.

**J, U models**

Input the 20 kHz, 14.5 dBu, sine wave to channel 1 input terminal, and confirm that the PEAK indicator of channel 1 flashes or lights. Input the 20 kHz, 12.3 dBu, sine wave, and confirm that the PEAK indicator of channel 1 goes off.

**CHN model**

Input the 20 kHz, 14.0 dBu, sine wave to channel 1 input terminal, and confirm that the PEAK indicator of channel 1 flashes or lights. Input the 20 kHz, 12.3 dBu, sine wave, and confirm that the PEAK indicator of channel 1goes off.
Perform the same test for channel 2-4 in the same manner.
After test, set this unit to GAIN: 0dB, VOL: -90dB.

## 3. Inspection with attenuation test mode

**Condition:**

- Perform each test in this section in the attenuation test mode. (See “TEST PROGRAM 4-14. ATTENUATION test”)
- Connect an 8 Ω load resistor to each output terminal.
- Ground each input terminal via a 600 Ω resistor.

### 3-1. Residual noise

Measure the residual noise level at each output terminal and confirm that measured value is -65 dBu or less.

**Note:** Measure the noise level with the 22 Hz - 22 kHz band pass filter specified at 1-3.

## 4. Inspection with analog test mode

**Condition:**

- Perform each test item in this section with the analog test mode of the test program. (See "TEST PROGRAM 4-15. ANALOG test")
- Unless otherwise specified, perform the test with an 8 Ω resistor connected to each output terminal.

### 4-1. Link out

Input the 1 kHz, -10 dBu sine wave to each input terminal and confirm that the output voltage obtained at each link out terminal is -10 ±0.5 dBu.

### 4-2. Efficiency

Input the 1 kHz sine wave to the channel 1 input terminal and confirm that the primary power consumption is 175 ±10 W when the output voltage obtained at the channel 1 output terminal is +29.2 dBu.
Perform the same test for channels 2-4 in the same manner.

### 4-3. Gain

Input the 1 kHz, 0 dBu sine wave to each input terminal and confirm that the output voltage obtained at each output terminal is +29.1 ±1.2 dBu.

### 4-4. Frequency response

Perform the following test at each channel.
Input the 10 Hz, 1 kHz, 20 kHz, 0 dBu sine wave to the input terminal and one by one measure the output voltage obtained at the output terminal for each frequency.
Confirm that the output voltage at 10 Hz is 0 ±0.5 dB when compared with the output voltage at 1 kHz (0 dB).
Confirm that the output voltage at 20 kHz is +0.5 ±0.5 dB when compared with the output voltage at 1 kHz (0 dB).

### 4-5. Distortion

Perform the following test at all channels at the same time.
Input the 1kHz sine wave to each channel input terminal and confirm that the distortion at each channel output terminal is 1.0 % or less when 500 W (with 8 Ω load) output is obtained for each terminal at the same time.

### 4-6. Maximum output

Perform the following test at all channels at the same time.
Connect the 4 Ω 500 W resistor to output terminal.
Input the BURST signal as shown in fig. 2 to each input terminal and adjust the input signal level so that a Vburst voltage of 174 Vp-p (volt peak to peak) is obtained in each channel output terminals.
Measure the last wave of the BURST signal peak to peak by the oscilloscope's MEASURE function. Confirm that the measured voltage is 170 volt or more. (See fig. 2)

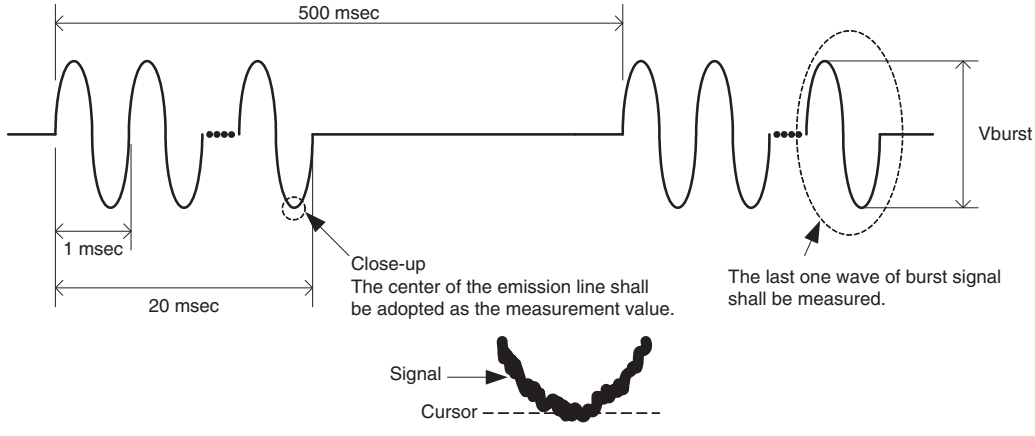



**Fig. 2**

### 4-7. Channel separation

1) Ground the channel 2, channel 3 and channel 4 input terminals via a 600 Ω resistor.
   Input the 1 kHz, 0 dBu sine wave to the channel 1 input terminal and measure the output voltage obtained at the channel 1 output terminal as the reference voltage (0 dB).
   Confirm that the output voltage at the channel 2, channel 3 and channel 4 output terminals is -65 dB or less as compared with the reference voltage.
2) Ground the channel 1, channel 3 and channel 4 input terminals via a 600 Ω resistor.
   Input the 1 kHz, 0 dBu sine wave to the channel 2 input terminal and measure the output voltage obtained at the channel 2 output terminal as the reference voltage (0 dB).
   Confirm that the output voltage at the channel 1, channel 3 and channel 4 output terminals is -65 dB or less as compared with the reference voltage.
3) Ground the channel 1, channel 2 and channel 4 input terminals via a 600 Ω resistor.
   Input the 1 kHz, 0 dBu sine wave to the channel 3 input terminal and measure the output voltage obtained at the channel 3 output terminal as the reference voltage (0 dB).
   Confirm that the output voltage at the channel 1, channel 2 and channel 4 output terminals is -65 dB or less as compared with the reference voltage.
4) Ground the channel 1, channel 2 and channel 3 input terminals via a 600 Ω resistor.
   Input the 1 kHz, 0 dBu sine wave to the channel 4 input terminal and measure the output voltage obtained at the channel 4 output terminal as the reference voltage (0 dB).
   Confirm that the output voltage at the channel 1, channel 2 and channel 3 output terminals is -65 dB or less as compared with the reference voltage.

   **Note:** Measure the output level with the 22 Hz-22 kHz band pass filter specified at 1-3.

### 4-8. Output noise level

With each input terminal grounded via a 600 Ω resistor, measure the noise level at each output terminal and confirm that the measured value is -60 dBu or less.

**Note:** Measure the noise level with the 22 Hz-22 kHz band pass filter specified at 1-3.

### 4-9. Stability

With no load resistors connected to all output terminals, input the 1 kHz, +7.0 dBu square wave to all input terminals and measure the primary power consumption (Wno_load).
With the 0.1 uF capacitor connected to all output terminals, input the 1 kHz, +7.0 dBu square wave to all input terminals and measure the primary power consumption (Wcap_load).
Confirm that the following equation is satisfied.

Wcap_load-Wno_load = 60 W or less

## 5. Inspection with BRIDGE mode

**Condition:**

- Perform each test item in this section with the bridge test mode of the test program. (See “TEST PROGRAM 4-16. BRIDGE test”)
- Connect individually the 16 Ω load resistor to channel 1 and channel 3 output terminals.
- Keep the measurement reference of the measuring instrument in floating condition and connect it to the middle point of each load resistor.
- Do not connect any resistor to channel 2 and channel 4 output terminals.
- The input terminals and output terminals of channel 2 and channel 4 are not used in this section.

### 5-1. Gain

Input the 1 kHz, 0 dBu sine wave to each input terminal and check that the output voltage obtained at each output terminal is +29.1 ±1.2 dBu.

### 5-2. Frequency response

Perform the following test at each channel.
Input the 10 Hz, 1 kHz, 20 kHz, 0 dBu sine wave to the input terminal and one by one measure the output voltage obtained at the output terminal for each frequency.
Confirm the output voltage at 10 Hz is 0 ±0.5 dB when compared with the output voltage at 1 kHz (0 dB).
Confirm the output voltage at 20 kHz is +0.5 ±0.5 dB when compared with the output voltage at 1 kHz (0 dB).

## 6. Confirming operation of NX-DFLT card

Turn off the power, and insert the NX-DFLT card into the expansion slot. Turn on the power, and confirm that an indicator (LED) of the NX-DFLT card lights.
Turn off the power.
Note: Be sure to turn off the power before inserting the NX-DFLT card.

# ■ 検査

## 1. 測定条件

### 1-1. 環境

- 常温：10 ℃～ 35 ℃
- 恒湿：45 % ～ 85 %

### 1-2. 電源電圧

- 電気的特性の検査の際には電源電圧と周波数を 100 V +2/-0 %、60 Hz に設定してください。

### 1-3. 測定器

- 検査に使用する測定器は、本文中に記載の規格を十分精度良く測定できる精度及び確度を持つものを使用してください。
- 測定器の入力インピーダンスは 1 M Ω以上のものを使用してください。
- ノイズおよび歪率の測定には 22 Hz－22 kHz のバンドパスフィルタを使用してください。
  オーディオプレシジョン社製オーディオアナライザシステムを使用するときは、フィルター設定を下記の通りとします。
  BW　　：22 Hz － 22 kHz
  Filter（Fltr）　：None

### 1-4. 接続

チャンネル 1 ～ 4 の各信号入出力端子は下図のとおりとします。

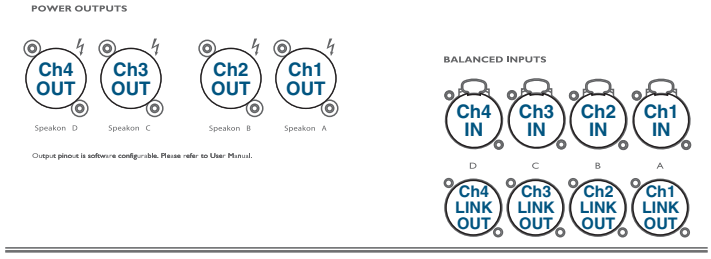



**図 1**

1-4-1. 入力端子

XLR-3-31 タイプコネクタ（メスキャノンコネクタ）をチャンネル 1 ～チャンネル 4 の入力端子として使用します。
条件　　：バランス入力
配線　　：1 番ピンをグランド、2 番ピンをホット ( ＋ )、3 番ピンをコールド ( － ) に接続します。

1-4-2. 出力端子

スピコンコネクターをチャンネル 1 ～チャンネル 4 の出力端子として使用します。
スピコンコネクターの 1 ＋ピンと 1 －ピンの間に負荷抵抗を接続します。

1-4-3. 負荷抵抗

無誘導性で各項目を安全に検査するのに十分な電力定格を持つ負荷抵抗を使用します。

1-4-4. リンクアウト端子

XLR-3-32 タイプコネクタ(オスキャノンコネクタ)をチャンネル 1 ～チャンネル 4 のリンクアウト端子として使用します。
条件　　：バランス出力
配線　　：1 番ピンをグランド、2 番ピンをホット、3 番ピンをコールドにそれぞれ接続します。

### 1-5. その他

本文中では以下のように定義します。
0 dBu = 0.775 Vrms

## 2. 通常モード検査

**条件：**

- 各入力端子を 600 Ω抵抗を介して接地します。
- 出力端子に負荷抵抗は接続しません。

### 2-1. 電源 ON シーケンス

1）電源スイッチを ON にします。LCD に最新版ファームウェアのバージョンが表示されます。

例）ファームウェアバージョン 1.00

```
-- [v 1.00] --
(c) NEXO 2007.
```

2）電源スイッチ ON 後 4 秒以内に、全ファンが低速で回転をすることを確認します。
3）電源スイッチ ON 後 18 ± 3 秒以内に、LCD に下記の画面が表示されること確認します。また、POWER インジケーターと各チャンネルのボリュームインジケーターの 1 つが点灯することを確認します。

```
 -20.0    -20.0    -20.0    -20.0  Vol(dB)
[MAIN  ][MAIN  ][SUB   ][SUB   ] <    >
```

### 2-2. アイドリング時の消費電力

1 次側消費電力が 70 ± 20 W であることを確認します。

### 2-3. 出力端子 DC 電圧

各出力端子の DC 電圧（Vdc）が 0 V ± 50 mV であることを確認します。

### 2-4. PEAK インジケーター

本機を GAIN：0 dB、VOL：0 dB に設定します。

**J、U models**

チャンネル 1 の入力端子に 20 kHz、14.5 dBu の正弦波を入力し、チャンネル 1 の PEAK インジケーターが点滅または点灯することを確認します。チャンネル 1 の入力端子に 20 kHz、12.3 dBu の正弦波を入力し、チャンネル 1 の PEAK インジケーターが消灯することを確認します。

**CHN model**

チャンネル 1 の入力端子に 20 kHz、14.0 dBu の正弦波を入力し、チャンネル 1 の PEAK インジケーターが点滅または点灯することを確認します。チャンネル 1 の入力端子に 20 kHz、12.32 dBu の正弦波を入力し、チャンネル 1 の PEAK インジケーターが消灯することを確認します。
チャンネル 2 ～ 4 で同様の検査を行います。
検査終了後、本機を GAIN：0 dB、VOL：-90 dB に設定します。

## 3. アッテネーション検査モードでの検査

**条件：**

- 各検査をテストプログラムのアッテネーション検査モードで行います。（「テストプログラム 4-14. ATTENUATION 検査」を参照）
- 各出力端子に 8 Ω負荷抵抗を接続します。
- 各入力端子を 600 Ω抵抗を介して接地します。

### 3-1. 残留ノイズ

各出力端子の残留ノイズレベルが -65 dBu 以下であることを確認します。

**注：** 測定には 1 － 3 節に記載のバンドパスフィルタを使用します。

## 4. アナログ検査モードでの検査

**条件：**

- 各検査をテストプログラムのアナログ検査モードで行います。（「テストプログラム 4-15. ANALOG 検査」を参照）
- 特に指定のない限り、検査は各出力端子に 8Ω 負荷抵抗を接続した状態で行います。

### 4-1. リンクアウト

各入力端子に 1 kHz、-10 dBu の正弦波を入力したとき、各リンクアウト出力端子に -10 ±0.5 dBu の出力を得ることを確認します。

### 4-2. 効率

チャンネル 1 の入力端子に 1 kHz の正弦波を入力し、チャンネル 1 の出力端子に +29.2 dBu の出力を得たとき、 1 次側消費電力が 175 ± 10 W であることを確認します。
チャンネル 2 ～チャンネル 4 で同様の検査を行います。

### 4-3. 利得

各入力端子に 1 kHz、0 dBu の正弦波を入力したとき、各出力端子に +29.1 ±1.2 dBu の出力を得ることを確認します。

### 4-4. 周波数特性

各チャンネルで下記の検査を行います。
入力端子に 10 Hz、1 kHz、20 kHz、0 dBu の正弦波を入力し、各周波数での出力電圧を測定します。
10 Hz における出力電圧が 1 kHz の出力電圧（0 dB）と比較して 0 ±0.5 dB 以内であることを確認します。
20 kHz における出力電圧が 1 kHz の出力電圧（0 dB）と比較して +0.5 ±0.5 dB 以内であることを確認します。

### 4-5. 歪率

下記の検査を全チャンネル同時に行います。
各チャンネルの入力端子へ 1 kHz の正弦波を入力し、各チャンネルの出力端子にて同時に 500 W（8Ω 負荷）の出力を得たとき、歪率が 1.0 % 以下であることを確認します。

### 4-6. 最大出力

下記の検査を全チャンネル同時に行います。
各出力端子に 4 Ω 500 W 負荷抵抗を接続します。
各チャンネルの入力端子へ図 2 に示すようなバースト信号を入力し、各チャンネルの出力端子に 174 Vp-p のバースト出力が得られるように入力信号レベルを調整します。
オシロスコープの MEASURE 機能の Peak to Peak で、バースト信号の最後の 1 波を読みとった値が 170 V 以上であることを確認します。（図 2 参照）

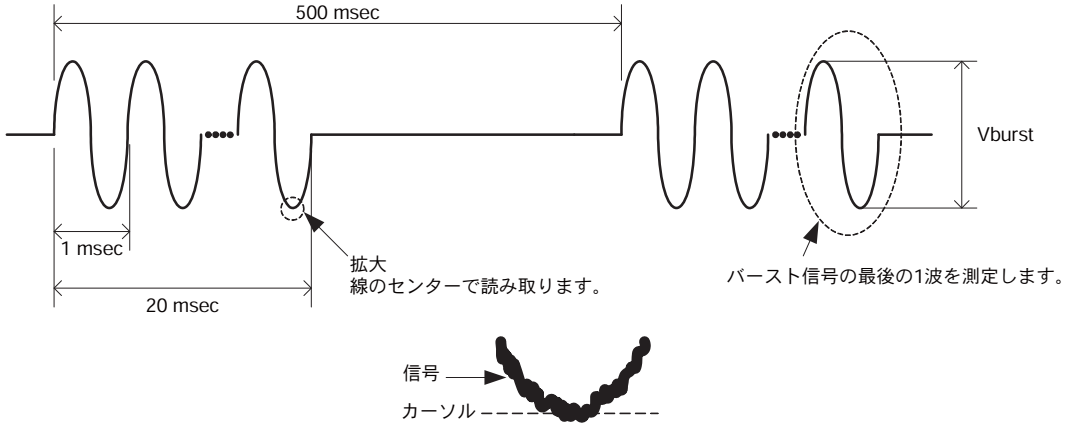



**図 2**

### 4-7. チャンネルセパレーション

1）チャンネル 2、チャンネル 3、チャンネル 4 の入力端子を 600Ω 抵抗を介して接地します。
チャンネル 1 の入力端子に 1 kHz、0 dBu の正弦波を入力したとき、チャンネル 1 の出力端子に得られる出力電圧を基準レベルとします。（0 dB）
チャンネル 2、チャンネル 3、チャンネル 4 の出力端子に得られる出力レベルが基準レベル（0 dB）に対して -65 dB 以下であることを確認します。

2）チャンネル 1、チャンネル 3、チャンネル 4 の入力端子を 600Ω 抵抗を介して接地します。
チャンネル 2 の入力端子に 1 kHz、0 dBu の正弦波を入力したとき、チャンネル 2 の出力端子に得られる出力電圧を基準レベルとします。（0 dB）
チャンネル 1、チャンネル 3、チャンネル 4 の出力端子に得られる出力レベルが基準レベル（0 dB）に対して -65 dB 以下であることを確認します。

3）チャンネル 1、チャンネル 2、チャンネル 4 の入力端子を 600Ω 抵抗を介して接地します。
チャンネル 3 の入力端子に 1 kHz、0 dBu の正弦波を入力したとき、チャンネル 3 の出力端子に得られる出力電圧を基準レベルとします。（0 dB）
チャンネル 1、チャンネル 2、チャンネル 4 の出力端子に得られる出力レベルが基準レベル（0 dB）に対して -65 dB 以下であることを確認します。

4）チャンネル 1、チャンネル 2、チャンネル 3 の入力端子を 600Ω 抵抗を介して接地します。
チャンネル 4 の入力端子に 1 kHz、0 dBu の正弦波を入力したとき、チャンネル 4 の出力端子に得られる出力電圧を基準レベルとします。（0 dB）
チャンネル 1、チャンネル 2、チャンネル 3 の出力端子に得られる出力レベルが基準レベル（0 dB）に対して -65 dB 以下であることを確認します。

**注：** 出力レベルは 1-3 項で規定する 22 Hz － 22 kHz バンドパスフィルターを通して測定します。

### 4-8. 出力ノイズレベル

各入力端子を 600 Ω抵抗を介して接地した状態で、各出力端子のノイズレベルが -60 dBu 以下であることを確認します。

**注：** ノイズレベルは 1-3 項で規定する 22 Hz － 22 kHz バンドパスフィルターを通して測定します。

### 4-9. 安定度

全出力端子に負荷抵抗を接続しない状態で、全入力端子に 1 kHz、+7.0 dBu の方形波を入力し、 1 次側消費電力を測定します。（Wno_load）
全出力端子に 0.1 uF コンデンサを接続した状態で、全入力端子に 1 kHz、+7.0 dBu の方形波を入力し、 1 次側消費電力を測定します。（Wcap_load）
下記の式が成り立つことを確認します。
Wcap_load - Wno_load = 60 W 以下

## 5. ブリッジモードでの検査

**条件：**

- 各検査をテストプログラムの「ブリッジ検査モード」で行います。(「テストプログラム 4-16. BRIDGE 検査」を参照)
- チャンネル 1、チャンネル 3 の出力端子各々に 16Ω 負荷抵抗を接続します。
- 測定器の基準点をフローティング（グランドラインから切り離した）状態で、負荷抵抗の中点へ接続します。
- チャンネル 2、チャンネル 4 の出力端子に負荷抵抗は接続しないでください。
- チャンネル 2、チャンネル 4 の入力端子、出力端子は使用しません。

### 5-1. 利得

各入力端子に 1 kHz、0 dBu の正弦波を入力し、各出力端子に得られる出力電圧が +29.1 ±1.2 dBu であることを確認します。

### 5-2. 周波数特性

各チャンネルで下記の検査を行います。
入力端子に 10 Hz、1 kHz、20 kHz、0 dBu の正弦波を入力し、各周波数での出力電圧を測定します。
10 Hz における出力電圧が、1 kHz の出力電圧（0 dB）と比較して 0 ±0.5 dB 以内であることを確認します。
20 kHz における出力電圧が、1 kHz（0 dB）の出力電圧と比較して +0.5 ±0.5 dB 以内であることを確認します。

## 6. NX-DFLT カードの動作確認

電源を OFF し、拡張スロットに NX-DFLT カードを挿入します。電源を ON し、NX-DFLT カードのインジケーターが点灯することを確認します。
電源を OFF します。

**注：** NX-DFLT カードは、必ず電源スイッチを切ってから挿入してください。

# ■ UPDATING THE FIRMWARE

## 1. Preparation

### 1-1. Downloading and installing the software for update

1) Download http://www.st.com/stonline/products/support/micro/files/standalone_jtag.zip.
2) Unpack the StandaloneJTAG_1_20.zip.
3) Double click the StandaloneJTAG_1_20, and the following install screen appears. (Fig. 1)
4) Click the [Finish] button to start installing the software for update.
5) Click the [Next] and [Yes] buttons to finish installing.
6) Restart the PC after completing the installation.

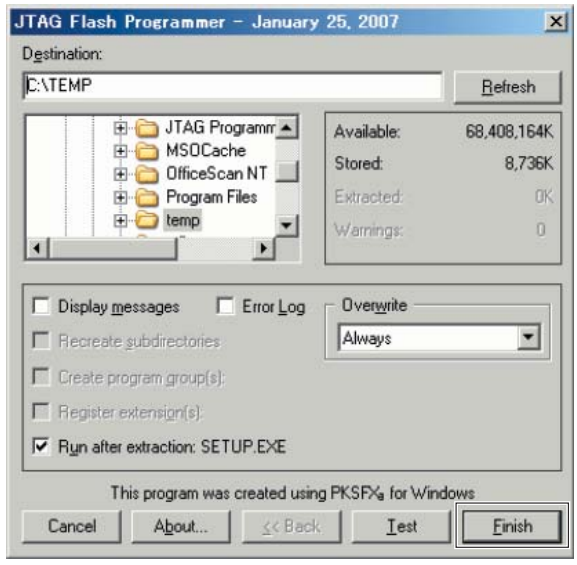



Fig. 1 Install screen

### 1-2. Connection

Connect the USB port of the PC to the connector CN005 of the CONTROL circuit board with the USB-JTAG adaptor (RLINK-ST).

**Note:**
When you connect the USB-JTAG adaptor (RLINK-ST) for the first time, the USB driver will be required. The USB driver is included in the downloaded file at previous step 1-1. Locate and install the driver.

## 2. Updating operation

1) Turn on the power to this unit.
2) Start up the installed JTAG Programmer.
3) Select a new project from the project menu. The following “Create Project” screen appears. (Fig. 2)
4) Input the Project Name, Device Family and Device Name as the followings.

Project Name : an (any name may be used)
Device Family : uPSD3300
Device Name : uPSD3354DV-40U6

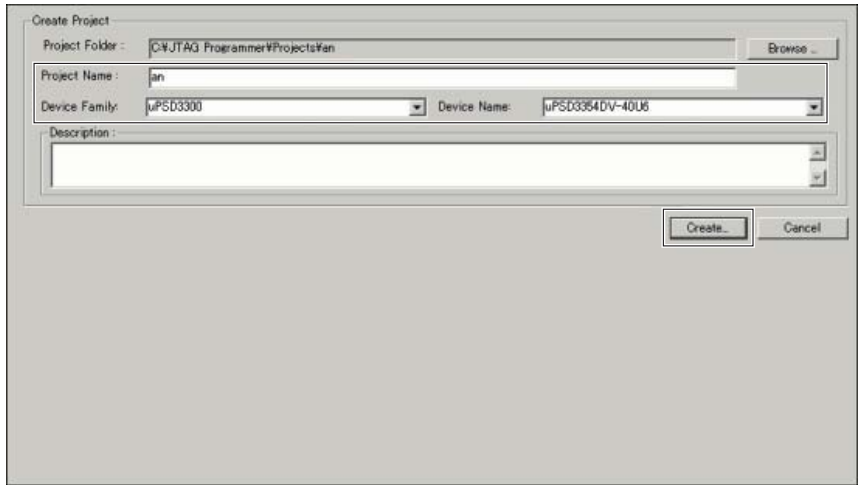



Fig. 2 Create Project screen

5) Click the [Create] button, and the following JTAG Programmer screen appears. (Fig. 3)
6) Click the [Browse] button and select the desired object file.
   Check the [All] at Select region, and select Program/Verify at Select operation.

**Note:**
This operation is needed when you start up for the first time. Click the [Save] button of save or retrieve JTAG-ISP setup to save the set up file so that this operation will not be required again.

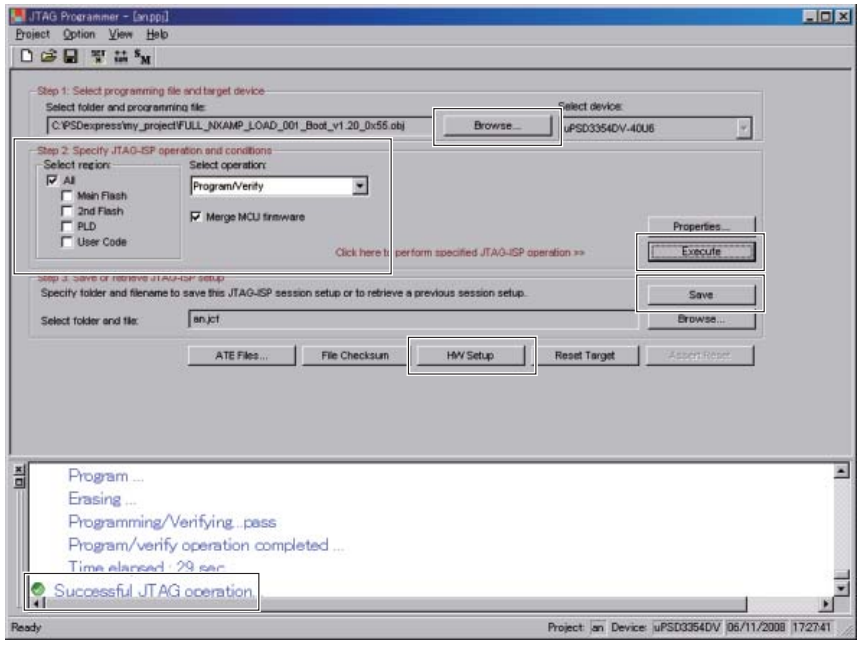



Fig. 3 JTAG Programmer screen

7) Click the [HW Setup] button, and the following hardware setting screen appears. (Fig. 4)
8) Select the RLink at Hardware selection.

**Note:**
This operation is needed when you start up for the first time. Click the [Save] button of save or retrieve JTAG-ISP setup to save the set up file so that this operation will not be required again.

Fig. 4 Hardware Setting screen

9) Click the [Execute] button, and the following JTAG-ISP Operations screen appears. (Fig. 5)

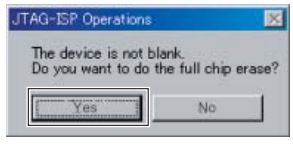



Fig. 5 JTAG-ISP Operations screen

10) Click the [Yes] button to start updating the firmware.
11) Restart the PC after the completion of the updating.

# ■ ファームウェアのアップデート

## 1. 準備

### 1-1. アップデート用ソフトウェアのダウンロードとインストール

1）下記をダウンロードします。
http://www.st.com/stonline/products/support/micro/files/standalone_jtag.zip.
2）StandaloneJTAG_1_20.zip を解凍します。
3）StandaloneJTAG_1_20 をダブルクリックすると下記の入力画面が表示されます。（図 1）
4）[Finish] ボタンをクリックしてアップデート用ソフトウェアのインストールをスタートします。
5）[Next]、[Yes] などのボタンをクリックしてインストールを終了します。
6）インストール完了後、PC を再起動します。

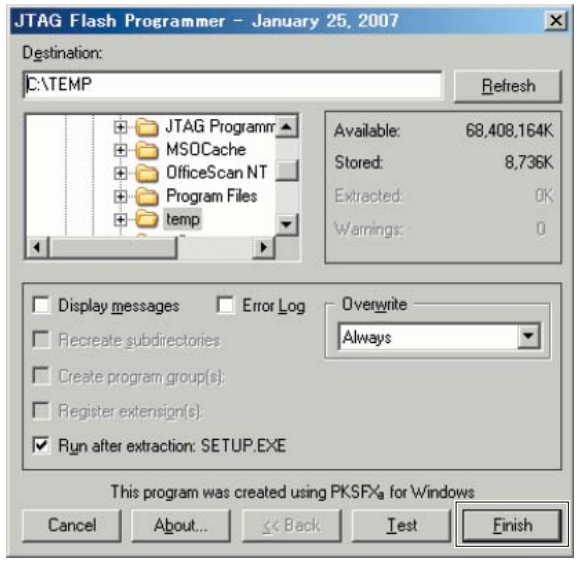



図 1 入力画面

### 1-2. 接続

PCのUSBポートとCONTROLシートのコネクター(CN005)を USBJTAG アダプター（RLINK-ST）で接続します。

**注意：**
最初に USB-JTAG アダプター（RLINK-ST）を接続するとき、USB ドライバー が必要です。USB ドライバーは、1-1 でダウンロードしたファイルに含まれていますので、それをインストールしてください。

## 2. アップデート操作

1）本機の電源スイッチを ON にします。
2）インストールした JTAG Programmer をスタートします。
3）Project menu から new project を選ぶと下記の Create Project 画面が表示されます。（図 2）
4）Project Name、Device Family Device Name を下記のように入力します。

Project Name : an（他の名称でも入力できます）
Device Family : uPSD3300
Device Name : uPSD3354DV-40U6

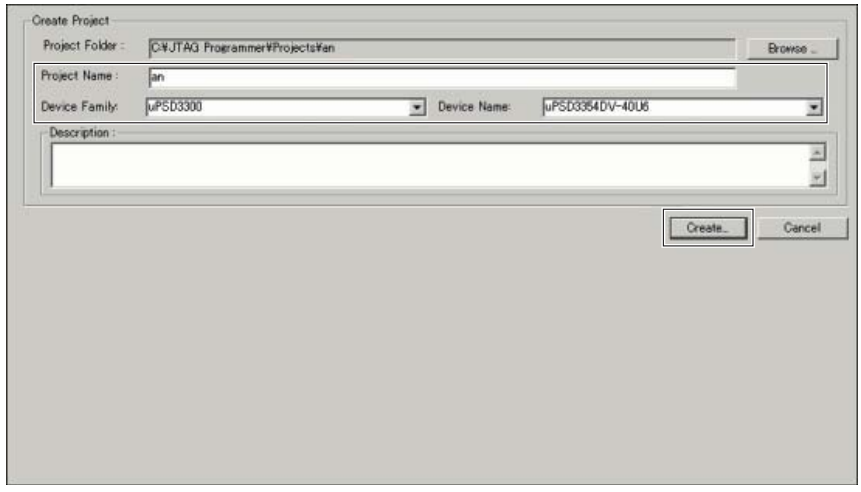



図 2 Create Project 画面

5）［Create］ボタンをクリックすると下記の JTAG Programmer 画面が表示されます。（図 3）
6）［Browse］ボタンをクリックし、目的のファイルを選びます。
［Select region］の［All］にチェック（レ）します。［Select operation］の［Program/Verify］を選びます。

**注意：**
この操作は最初のスタートのときに必要になります。Save or retrieve JTAG-ISP setup 内の［Save］ボタンをクリックしてセットアップファイルをセーブすれば、次からこの操作は不要になります。

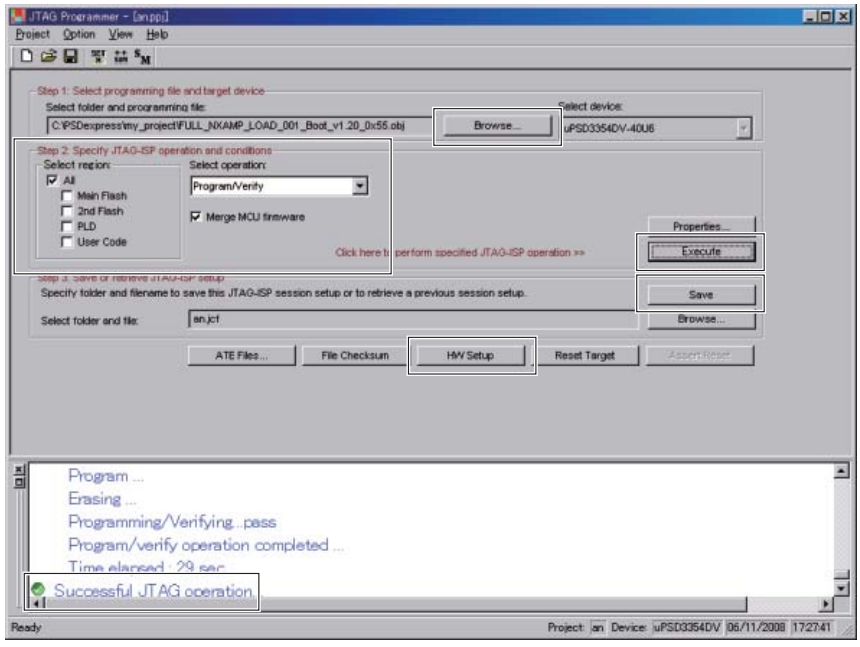



図 3 JTAG Programmer 画面

7）［HW Setup］ボタンをクリックすると下記の「Hhardware Setting」画面が表示されます。（図 4）
8）［Hardware Selection］の［Rlink］を選びます。

**注意：**
この操作は最初のスタートのときに必要になります。Save or retrieve JTAG-ISP setup 内の［Save］ボタンをクリックしてセットアップファイルをセーブすれば、次からこの操作は不要になります。

図 4 Hardware Setting 画面

9）［Execute］ボタンをクリックすると下記の JTAG-ISP Operations 画面が表示されます。（図 5）

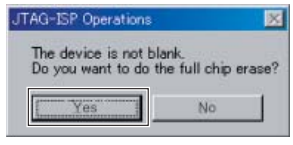



図 5 JTAG-ISP Operations 画面

10）［Yes］ボタンをクリックしてファームウェアのアップデートをスタートします。
11）アップデート完了後、PC を再起動します。

# POWERED TD CONTROLLER

# NXAMP4x1

# PARTS LIST

## ■ CONTENTS（目次）


OVERALL ASSEMBLY（総組立） 1/2 ..... 2
2/2 ..... 4
PA UNIT（PA ユニット）..... 6
LCD ASSEMBLY（LCD Ass'y）..... 8
LOCATIONS OF HEAT SINK UNITS
（ヒートシンクユニットロケーション）..... 9
HEAT SINK UNIT L100（ヒートシンクユニット L100）..... 10
HEAT SINK UNIT L100（ヒートシンクユニット L100）..... 11
HEAT SINK UNIT L60（ヒートシンクユニット L60）..... 12
HEAT SINK UNIT L60（ヒートシンクユニット L60）..... 13
HEAT SINK UNIT L50（ヒートシンクユニット L50）..... 14
HEAT SINK UNIT OSH（ヒートシンクユニット OSH）..... 15
ELECTRICAL PARTS（電気部品）..... 16


**Notes: DESTINATION ABBREVIATIONS**

| | | | | | |
|---|---|---|---|---|---|
| CHN | : | Chinese model | U | : | U.S.A. model |
| J | : | Japanese model | | | |

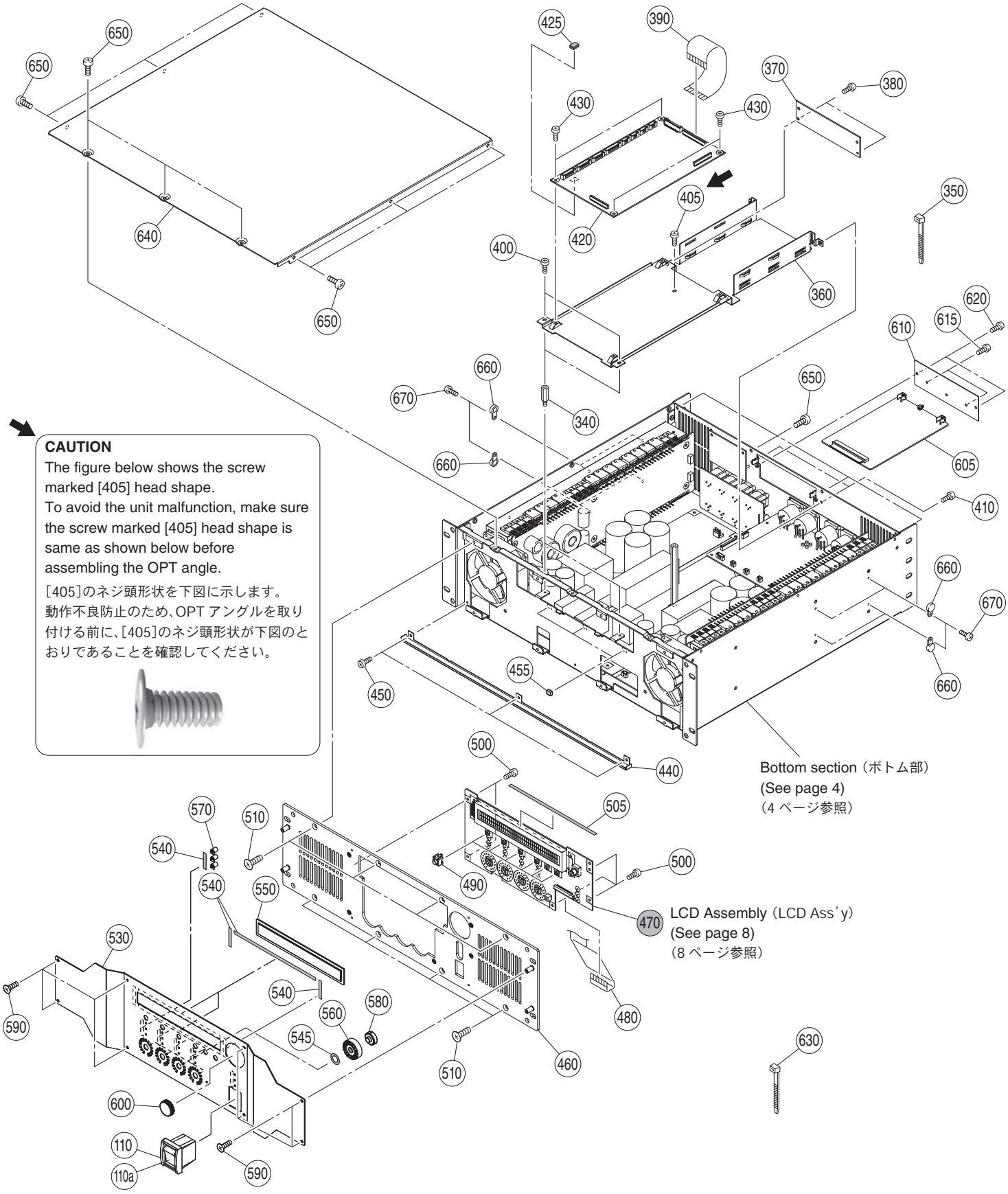
## ■ WARNING（注意）

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

⚠ 印の商品は、安全を維持するために重要な部品です。交換する場合は、安全のために必ず指定の部品をご使用ください。

- The numbers “QTY” show quantities for each unit.
- The parts with “--” in “PART NO.” are not available as spare parts.
- This mark “ } ” in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded ( ▭ ) part number is O, not zero.
- The second letter of the shaded ( ▭ ) part number is I, not one.
- 部品価格ランクは、変更になることがあります。
- QTY 欄に記されている数字は、各ユニット当たりの使用個数です。
- PART NO. が“--”の部品は、サービス用部品として準備されておりません。
- REMARKS 欄の「 }」マークの部品は、併用部品です。
- 網掛けの付いた PART NO. の 2 番目の文字は「ゼロ」ではなく、「オー」です。
- 網掛けの付いた PART NO. の 2 番目の文字は「イチ」ではなく、「アイ」です。

# ■ OVERALL ASSEMBLY 1/2（総組立 1/2）

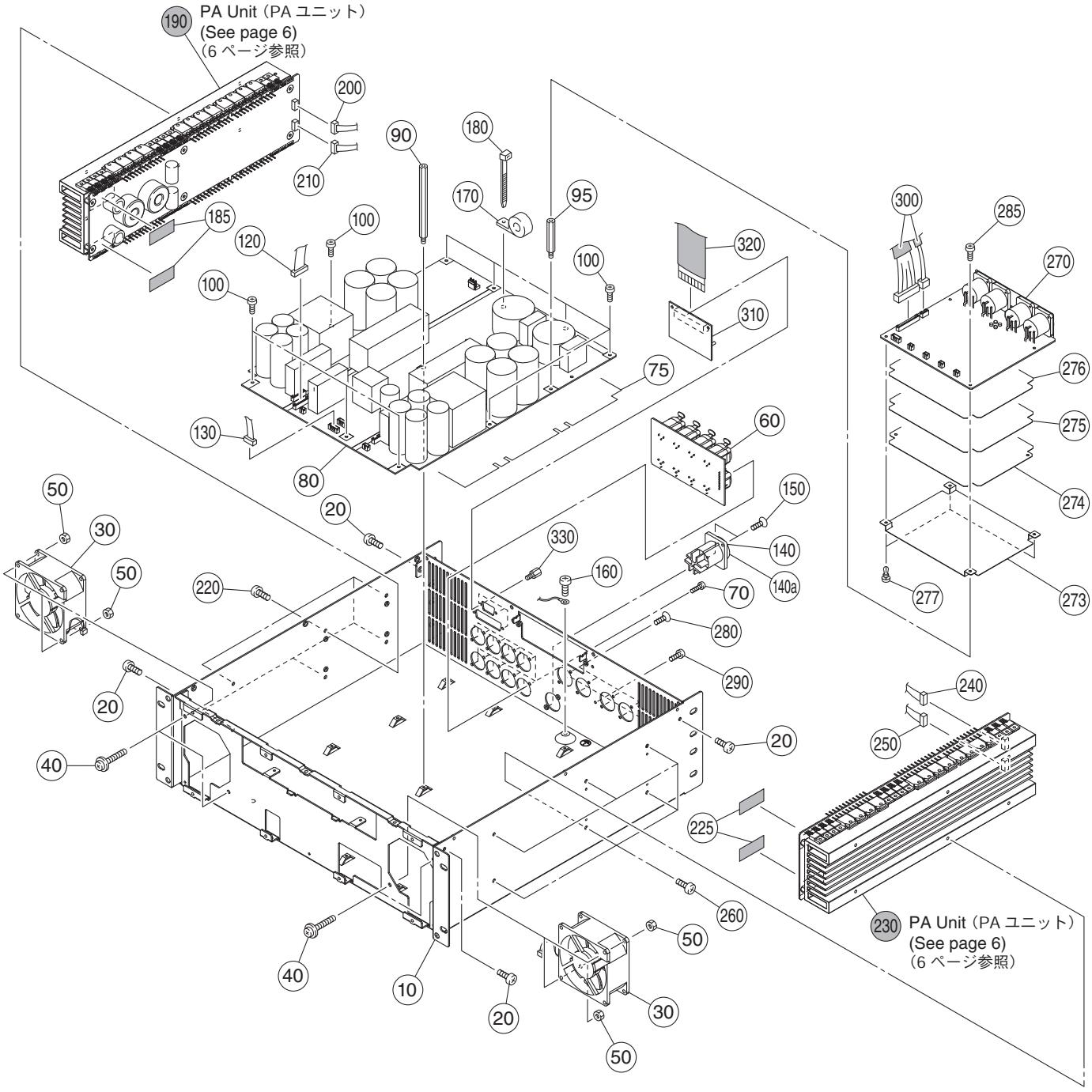


| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | | QTY | RANK |
|---|---|---|---|---|---|---|---|---|---|
| | | -- | OVERALL ASSEMBLY | AN-PA-LOW U | | J,U | (WK66600) | | |
| | | -- | OVERALL ASSEMBLY | AN-PA-LOW CHN | | CHN | (WK66620) | | |
| ⚠ | 110 | -- | CONNECTOR ASSEMBLY SWPS | VH3P AWG22 SW | | POWER | (WK94710) | | 09 |
| ⚠ * | 110a | **WK754500** | SWITCH POWER SEESAW | JW-M21RKK-NOD U.C. | | POWER SWITCH | | | |
| | 340 | -- | HEXAGONAL SPACER | H=20 B=5.5 | | | (WK67210) | 2 | |
| | 350 | -- | CORD HOLDER | T18R TYTIN CO. | | } | (V327280) | 9 | |
| | 350 | -- | CORD HOLDER | TYTON T18R L100 W2.5 BLACK | | } | (WX11230) | 9 | |
| | 360 | **WK671500** | OPT ANGLE | AN-PA | | | | | 05 |
| | 370 | **WJ971500** | CIRCUIT BOARD | OPT-AN | | | | | 16 |
| | 380 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2W3 | | | (WE87790) | 2 | 01 |
| | 390 | -- | FFC CABLE | SMCD 40P 70mm | | | (WK02120) | | |
| | 400 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2W3 | | | (WE87790) | 2 | 01 |
| | 405 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2B3 | | | (WF05470) | | 01 |
| | 410 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2B3 | | | (WE87780) | 2 | 01 |
| * | 420 | **WR776600** | CIRCUIT BOARD | CONTROL | | | | | 59 |
| | 425 | -- | CUSHION CONTROL | AN-PA | | | (WN15950) | | 01 |
| | 430 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2W3 | | | (WE87790) | 4 | 01 |
| | 440 | -- | SUB CHASSIS | AN-PA | | | (WK14900) | | |
| | 450 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2W3 | | | (WE87790) | 3 | 01 |
| | 455 | -- | CUSHION FRONT | AN-PA | | | (WN19370) | 3 | |
| | 460 | **WK670500** | FRONT PANEL | AN-PA-LOW | | | | | 10 |
| | 470 | **WK756700** | LCD ASSEMBLY | PA 8F27_8F28 | | | | | 24 |
| | 480 | -- | FFC CABLE | SMCD 30P 210mm | | | (WK02100) | | |
| | 490 | **WK673500** | PUSH BUTTON | AN-PA | | SELECT-CH1,SELECT-CH2 | | 6 | 01 |
| | | | | | | SELECT-CH3,SELECT-CH4 | | | |
| | | | | | | VOL-A,VOL-B | | | |
| | 500 | -- | BIND HEAD SCREW | 3x4 MFZN2B3 | | | (WF10570) | 5 | 01 |
| | 505 | -- | DUST GUARD | AN-PA | | | (WN41240) | | |
| | 510 | -- | FLAT HEAD SCREW | 4x8 MFZN2B3 | | | (WE98030) | 8 | 01 |
| | 530 | **WK690800** | FRONT PANEL 2 | AN-PA-LOW | | | | | 08 |
| | 540 | -- | ADHESIVE TAPE | #5000NS W=5mm | | | (WG94020) | | 07 |
| | 545 | -- | DOUBLE SIDED ADHESIVE TAPE | 15P LM | | | (WM78140) | 4 | |
| | 550 | **WK585400** | LCD COVER | AN-PA | | | | | 06 |
| | 560 | **WA587301** | LEVEL METER | 15P | | CH1,CH2,CH3,CH4 | | 4 | 03 |
| | 570 | **WA773701** | LED LENS | 2P | | | | 7 | 01 |
| | 580 | **WK585300** | LENS BUTTON | AN-PA | | MUTE-CH1,MUTE-CH2 | | 4 | 01 |
| | | | | | | MUTE-CH3,MUTE-CH4 | | | |
| | 590 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2B3 | | | (WF05470) | 8 | 01 |
| | 600 | **WN002600** | ENCODER KNOB | AN-PA | | ENCODER | | | 02 |
| * | 605 | **WT661200** | CIRCUIT BOARD | NX-DFLT | | | | | |
| * | 610 | **WT951000** | DFLT PANEL | | | | | | |
| | 615 | -- | BIND HEAD SCREW | 3x6 MFZN2B3 | | | (WE87830) | 2 | 01 |
| | 620 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2B3 | | | (WE87780) | 2 | 01 |
| | 630 | -- | CORD HOLDER | T18R TYTIN CO. | | J,U | (V327280) | 9 | |
| | 630 | -- | CORD HOLDER | TYTON T18R L100 W2.5 BLACK | | J,U | (WX11230) | 9 | |
| | 630 | -- | CORD HOLDER | T18R TYTIN CO. | | CHN | (V327280) | 9 | |
| | 630 | -- | CORD HOLDER | TYTON T18R L100 W2.5 BLACK | | CHN | (WX11230) | 9 | |
| | 640 | -- | TOP COVER | 8F27 J,U | | J,U | (WR94530) | | |
| | 640 | -- | TOP COVER | AN-PA-LOW CHN | | CHN | (WK67020) | | |
| | 650 | -- | BIND HEAD TAPPING SCREW-B | 4x8 MFZN2B3 | | | (WE96200) | 13 | 01 |
| | 660 | -- | SCREW COVER | T5N | | | (WJ61830) | 8 | 01 |
| | 670 | -- | BIND HEAD TAPPING SCREW-B | 3x8 MFZN2B3 | | | (WE77440) | 8 | 01 |

✻ : New Parts

RANK: Japan only

# ■ OVERALL ASSEMBLY 2/2（総組立 2/2）

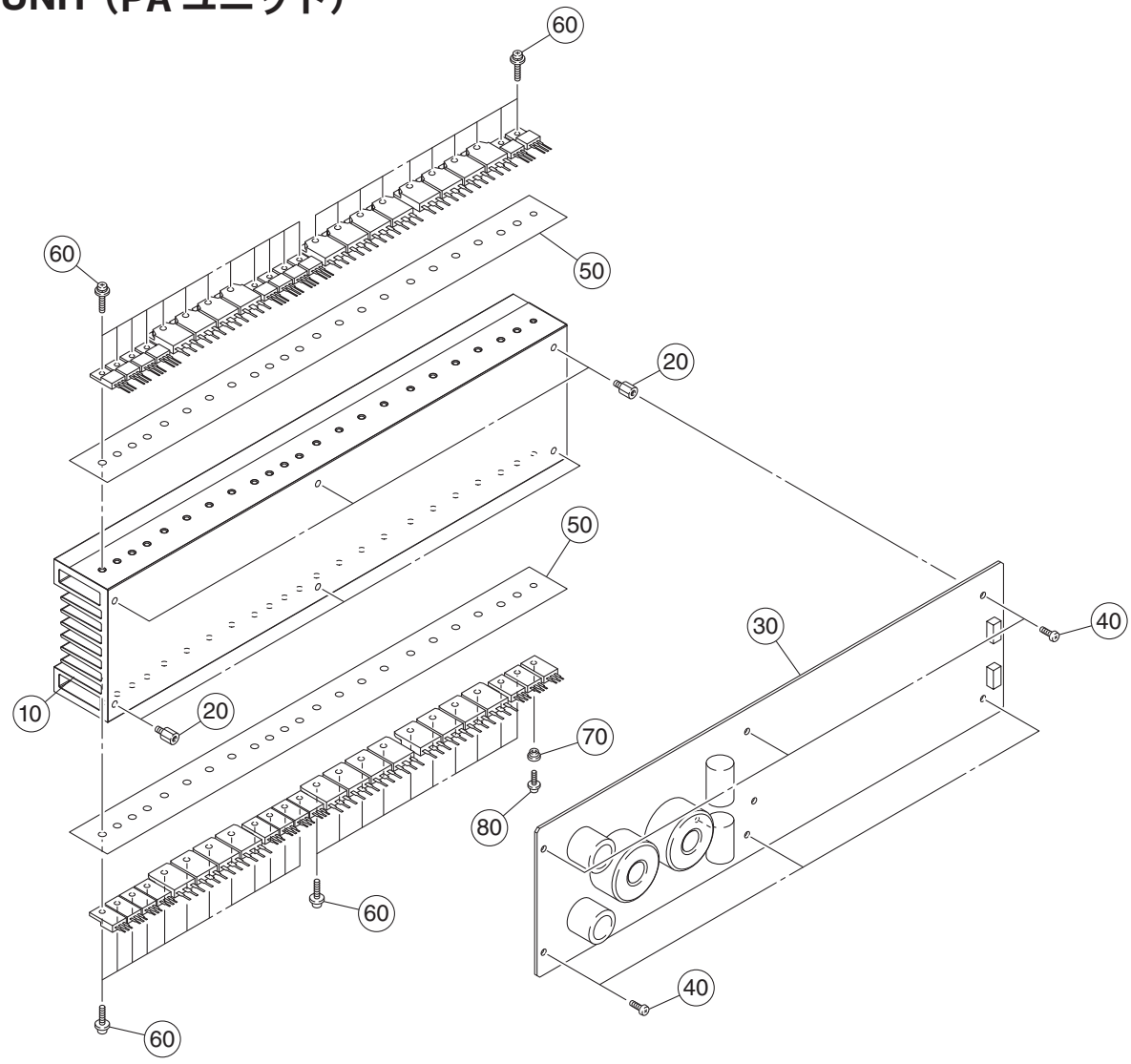


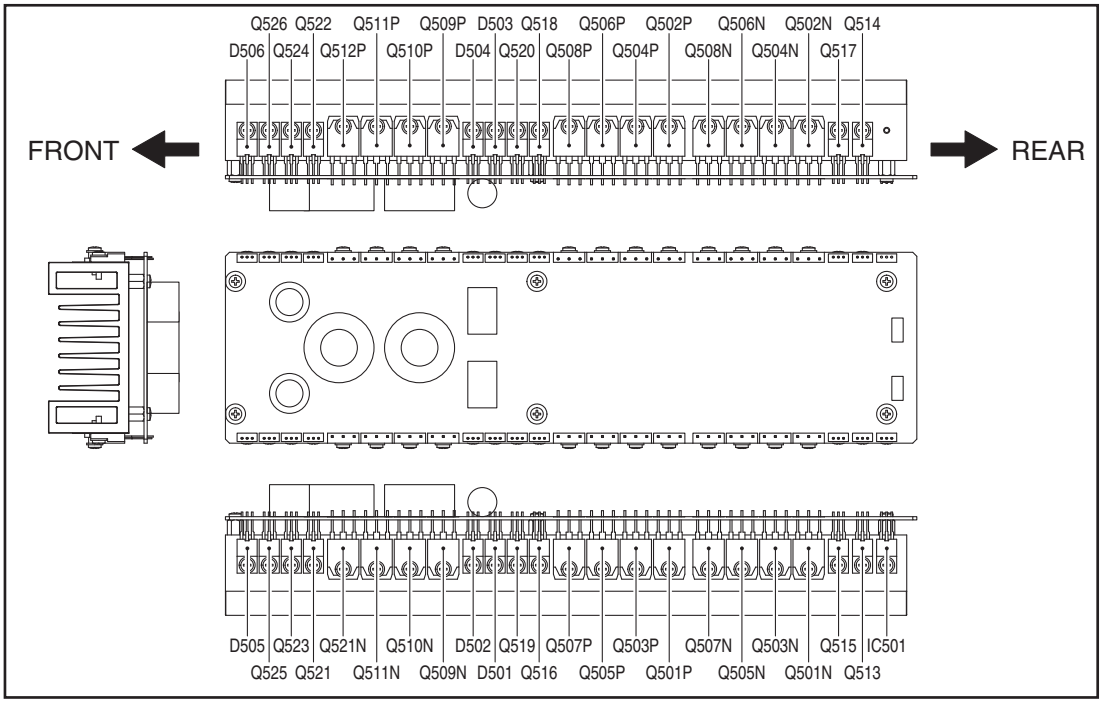
| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | 10 | **WK668500** | MAIN CHASSIS | AN-PA-LOW U | | J,U | | 16 |
| | 10 | **WK668600** | MAIN CHASSIS | AN-PA-LOW CHN | | CHN | | 16 |
| | 20 | -- | BIND HEAD TAPPING SCREW-B | 4x8 MFZN2B3 | | (WE96200) | 4 | 01 |
| | 30 | **V8746701** | DC FAN | FBA08A24H1TZ | | | 2 | 08 |
| | 40 | -- | BIND HEAD SCREW | 4x35 MFZN2W3 | | (WG16730) | 4 | 01 |
| | 50 | -- | HEXAGONAL NUT | M4 #1 | | (WG16920) | 4 | |
| | 60 | **WJ972700** | CIRCUIT BOARD | INANL | | | | 26 |
| | 70 | -- | BIND HEAD TAPPING SCREW-B | 2.6x8 MFZN2B3 | | (WE96170) | 16 | 01 |
| | 75 | -- | INSULATION SHEET PS | AN-PA | | (WM98090) | | |
| * | 80 | **WJ974101** | CIRCUIT BOARD | PSANL | | J,U | | 72 |
| * | 80 | **WJ974201** | CIRCUIT BOARD | PSANL | | CHN | | 72 |
| | 90 | -- | HEXAGONAL SPACER | H=89 B=5.5 | | (WK67180) | | |
| | 95 | -- | HEXAGONAL SPACER | H=41 B=5.5 | | (WN00250) | | |
| | 100 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2W3 | | (WE87790) | 9 | 01 |
| | 120 | -- | CONNECTOR ASSEMBLY PH11P | C&C 11P 200mm | | (WK68760) | | 03 |
| | 130 | -- | CONNECTOR ASSEMBLY PH9P | C&C 9P 200mm | | (WK68770) | | |
| | 140 | -- | CONNECTOR ASSEMBLY ACPS | 20A POWERCON ASSY | | J,U (WK66050) | | |
| | 140a | -- | CONNECTOR | POWERCON NAC3MPA | | J,U (WK66030) | 1 | |
| | 140 | -- | CONNECTOR ASSEMBLY ACPS | AC INLET ASSY | | CHN (WK66040) | | |
| | 140a | -- | CONNECTOR | AC INLET AP-300-3- | | CHN (WF40880) | 1 | |
| | 150 | -- | FLAT HEAD TAPPING SCREW-B | 3x8 MFZN2B3 | | J,U (WF26680) | 2 | |
| | 150 | -- | BIND HEAD TAPPING SCREW-B | 3x8 MFZN2B3 | | CHN (WE77440) | 2 | 01 |
| | 160 | -- | BIND HEAD TAPPING SCREW-S | 4x8 MFZN2W3 | | (WE94180) | | 01 |
| | 170 | -- | DATA LINE FILTER | K1 NFT-13BK2 NFT-25 | | (V312290) | | 06 |
| | 180 | -- | CORD HOLDER | T18R TYTIN CO. | | J,U (V327280) | 2 | |
| | 180 | -- | CORD HOLDER | TYTON T18R L100 W2.5 BLACK | | J,U (WX11230) | 2 | |
| | 180 | -- | CORD HOLDER | T18R TYTIN CO. | | CHN (V327280) | | |
| | 180 | -- | CORD HOLDER | TYTON T18R L100 W2.5 BLACK | | CHN (WX11230) | | |
| | 185 | -- | ADHESIVE TAPE | 15x30 | | (WG52680) | | 09 |
| * | 190 | **WJ949601** | PA UNIT | AN-PA-LOW 8F27 | | | | 58 |
| | 200 | -- | CONNECTOR ASSEMBLY SIG-PA1 | C&C 5P 420mm | | (WK02080) | | 03 |
| | 210 | -- | CONNECTOR ASSEMBLY | C&C 5P 420mm | | (WK90770) | | 03 |
| | 220 | -- | BIND HEAD TAPPING SCREW-B | 4x8 MFZN2B3 | | (WE96200) | 6 | 01 |
| | 225 | -- | ADHESIVE TAPE | 15x30 | | (WG52680) | | 09 |
| * | 230 | **WJ949601** | PA UNIT | AN-PA-LOW 8F27 | | | | 58 |
| | 240 | -- | CONNECTOR ASSEMBLY | C&C 5P 500mm | | (WK90790) | | |
| | 250 | -- | CONNECTOR ASSEMBLY SIG-PA4 | C&C 5P 500mm | | (WK17110) | | |
| | 260 | -- | BIND HEAD TAPPING SCREW-B | 4x8 MFZN2B3 | | (WE96200) | 6 | 01 |
| * | 270 | **WJ972901** | CIRCUIT BOARD | OUTANL | | | | 19 |
| | 273 | -- | INSULATION SHEET 1 | AN-PA | | (WM14990) | | |
| | 274 | -- | SHIELD 1 | AN-PA | | (WM14970) | | |
| | 275 | -- | SHIELD 2 | AN-PA | | (WM14980) | | |
| | 276 | -- | INSULATION SHEET 2 | AN-PA | | (WM15000) | | |
| | 277 | -- | PLASTIC RIVET | NRP-345 | | (CB81574) | 3 | 01 |
| | 280 | -- | FLAT HEAD TAPPING SCREW-B | 3x8 MFZN2B3 | | (WF26680) | 8 | |
| | 285 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2W3 | | (WE87790) | | 01 |
| | 290 | -- | BIND HEAD TAPPING SCREW-B | 3x8 MFZN2B3 | | (WE77440) | | 01 |
| | 300 | -- | CONNECTOR ASSEMBLY SENS | SENSE | | (WK02090) | | |
| * | 310 | **WJ971401** | CIRCUIT BOARD | RS232-GPI | | | | 16 |
| | 320 | -- | FFC ASSEMBLY | WK02110,SUMITUBE | | (WM15830) | | |
| | 330 | -- | HEXAGONAL LOCK SCREW | | | (WK51890) | 4 | 01 |
| | | | | | | | | |
| | | | ACCESSORIES | | | NXAMP4x1 | | |
| ⚠ | | **WK602800** | POWER CORD ASSEMBLY | UL18A | | U | | 10 |
| ⚠ | | **WC901301** | POWER CORD ASSEMBLY | CHN 3 2.5m | | CHN | | 14 |
| ⚠ * | | **WR856500** | POWER CORD ASSEMBLY | J 20A | | J | | |
| * | | **WN143600** | LEG ASSEMBLY | | | | | |

✻ : New Parts

RANK: Japan only

## ■ PA UNIT (PA ユニット)



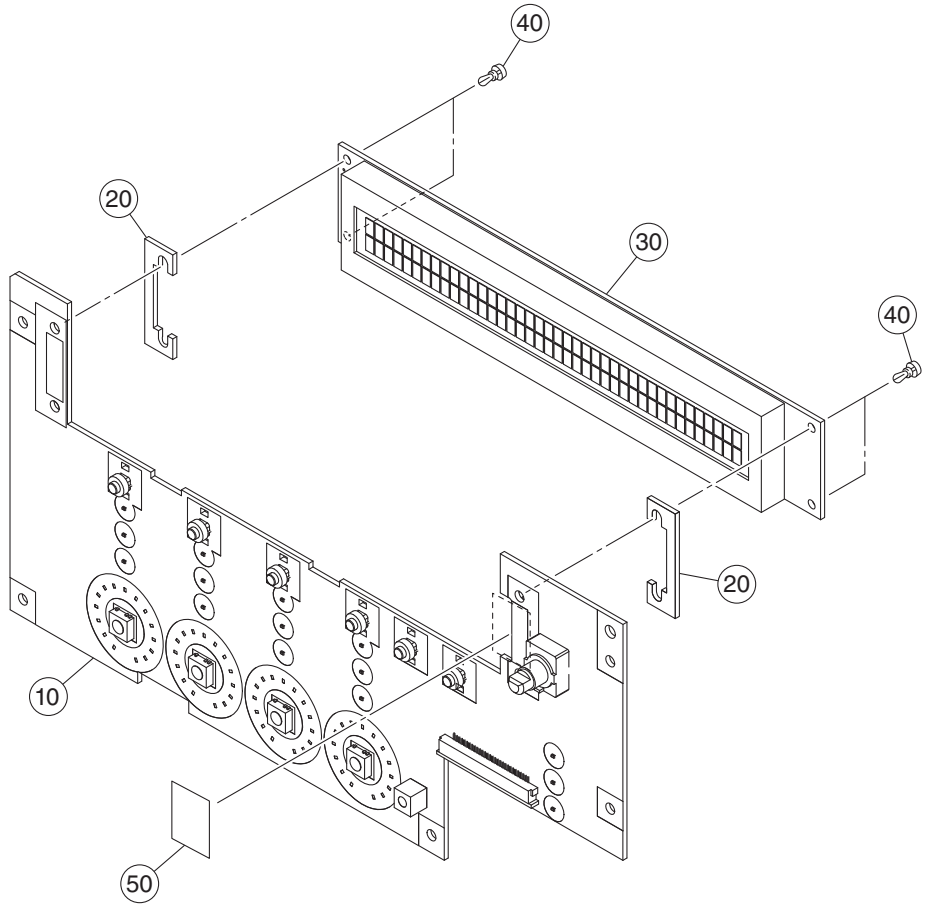



| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| * | | **WJ949601** | PA UNIT | AN-PA-LOW 8F27 | | | | 58 |
| | 10 | -- | HEAT SINK | AN-PA-LOW | | (WJ94980) | | |
| | 20 | -- | HEXAGPNAL SPACER | H=7.5 B=5.5 | | (WD49000) | 6 | |
| * | 30 | **WJ972500** | CIRCUIT BOARD | PAANL | | | | |
| | 40 | -- | BIND HEAD TAPPING SCREW-S | 3x6 MFZN2W3 | | (WE87790) | 6 | 01 |
| | 50 | -- | INSULATION SHEET | PA-L TBM51W T=0.15 | | (WK11930) | 2 | |
| | 60 | -- | BIND HEAD SCREW | 3x12 MFZN2W3 | | (WE87770) | 44 | 01 |
| | 70 | -- | INSULATING BUSH | 2.6M | | (WA00920) | | 01 |
| | 80 | -- | BIND HEAD SCREW | 2.6x8 MFZN2W3 SP | | (WE96770) | | 01 |
| | D501 | -- | DIODE | SF20L60U | | (V635170) | | 04 |
| | D502 | -- | DIODE | SF20L60U | | (V635170) | | 04 |
| | D503 | -- | DIODE | SF20L60U | | (V635170) | | 04 |
| | D504 | -- | DIODE | SF20L60U | | (V635170) | | 04 |
| | D505 | -- | DIODE | SF20L60U | | (V635170) | | 04 |
| | D506 | -- | DIODE | SF20L60U | | (V635170) | | 04 |
| | IC501 | -- | IC | LM35DT/NOPB | | TEMPERATURE SENSOR (X0670A0) | | 05 |
| | Q501N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q501P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q502N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q502P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q503N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q503P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q504N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q504P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q505N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q505P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q506N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q506P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q507N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q507P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q508N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q508P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q509N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q509P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q510N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q510P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q511N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q511P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q512N | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q512P | **V8094901** | PAIR TRANSISTOR | 2SA1492A/2SC3856A | | | | 06 |
| | Q513 | **WJ461500** | TRANSISTOR | 2SA1668A LFNO.600 | | | | 03 |
| | Q514 | **WJ461500** | TRANSISTOR | 2SA1668A LFNO.600 | | | | 03 |
| | Q515 | **WJ461600** | TRANSISTOR | 2SC4382A LFNO.600 | | | | 03 |
| | Q516 | **WJ461500** | TRANSISTOR | 2SA1668A LFNO.600 | | | | 03 |
| | Q517 | **WJ461600** | TRANSISTOR | 2SC4382A LFNO.600 | | | | 03 |
| | Q518 | **WJ461500** | TRANSISTOR | 2SA1668A LFNO.600 | | | | 03 |
| | Q519 | **WJ461600** | TRANSISTOR | 2SC4382A LFNO.600 | | | | 03 |
| | Q520 | **WJ461500** | TRANSISTOR | 2SA1668A LFNO.600 | | | | 03 |
| | Q521 | **V8093501** | FET | 2SK3003 LFNO.600 | | | | 04 |
| | Q522 | **V8093501** | FET | 2SK3003 LFNO.600 | | | | 04 |
| | Q523 | **V8093501** | FET | 2SK3003 LFNO.600 | | | | 04 |
| | Q524 | **V8093501** | FET | 2SK3003 LFNO.600 | | | | 04 |
| | Q525 | **V8093501** | FET | 2SK3003 LFNO.600 | | | | 04 |
| | Q526 | **V8093501** | FET | 2SK3003 LFNO.600 | | | | 04 |

✻ : New Parts

RANK: Japan only

# ■ LCD ASSEMBLY (LCD Ass'y)



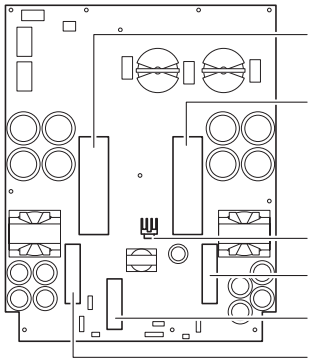

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| | **WK756700** | LCD ASSEMBLY | | | | | 24 |
| 10 | -- | CIRCUIT BOARD | PN-AN | | (WJ97130) | | 20 |
| 20 | -- | CIRCUIT BOARD | LCD | | (WK62420) | 2 | 08 |
| 30 | -- | LCD MODULE | CMS-CC2N0124UBSW-W | | (WJ43880) | | |
| 40 | -- | NYLON RIVET | P3570-W/BW | | (WK67760) | 4 | |
| 50 | -- | ACETATE TAPE | #570F W=19 | | (WG52600) | | 01 |
| 50 | -- | ACETATE TAPE | #570F W=19 | | (WX41610) | | |

✻: New Parts

RANK: Japan only

# ■ LOCATIONS OF HEAT SINK UNITS（ヒートシンクユニットロケーション）

Details on PSANL Circuit Board（PSANL P.C.B. 詳細）



Heat Sink Unit WK66910 (See page 10)（10 ページ参照）

Heat Sink Unit WK66920 (See page 11)（11 ページ参照）

Heat Sink Unit WM44760 (See page 15)（15 ページ参照）

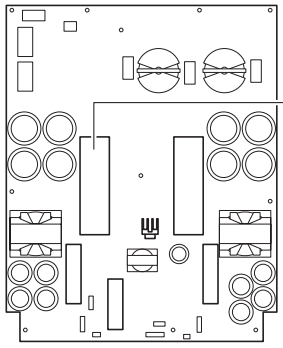
Heat Sink Unit WK66930 (See page 12)（12 ページ参照）

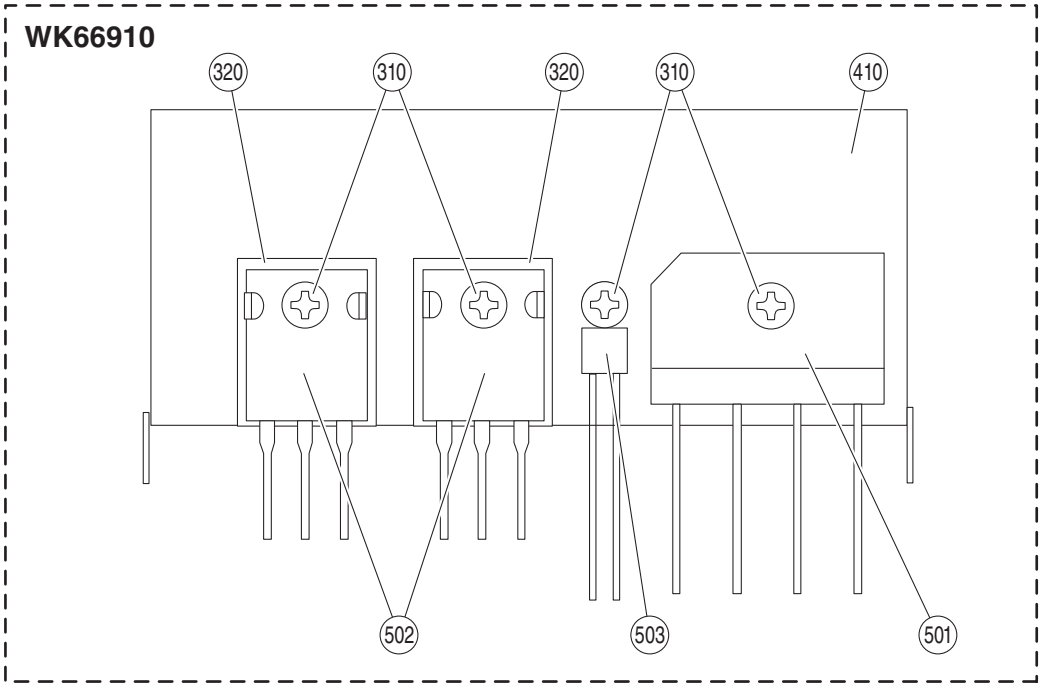
Heat Sink Unit WK66950 (See page 14)（14 ページ参照）

Heat Sink Unit WK66940 (See page 13)（13 ページ参照）

# ■ HEAT SINK UNIT L100（ヒートシンクユニット L100）

**PSANL Circuit Board**



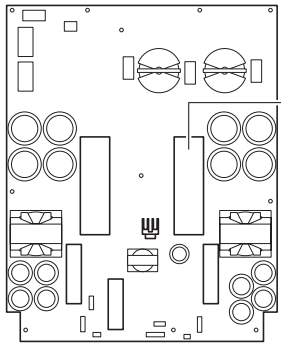

| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | | -- | HEAT SINK UNIT | AN-PA-HIGH 100mm | | (WK66910) | | |
| | 310 | -- | BIND HEAD SCREW | 3x10 MFZN2W3 | | (WE95290) | 4 | 01 |
| | 320 | -- | INSULATION SHEET | RSI T=0.07 | | (WB44860) | 2 | 01 |
| | 410 | -- | HEAT SINK PS | L100 ASSY | | (WM69000) | | |
| ⚠ | 501 | **WH268300** | DIODE STACK | RBV-3006 30A 600V | | | | 05 |
| | 502 | **WH268401** | IGBT | IRG4PC60UPBF | | | 2 | 12 |
| | 503 | -- | THERMISTOR | PTMS2331RP716 P7(85-C) | | (WH32400) | | 03 |

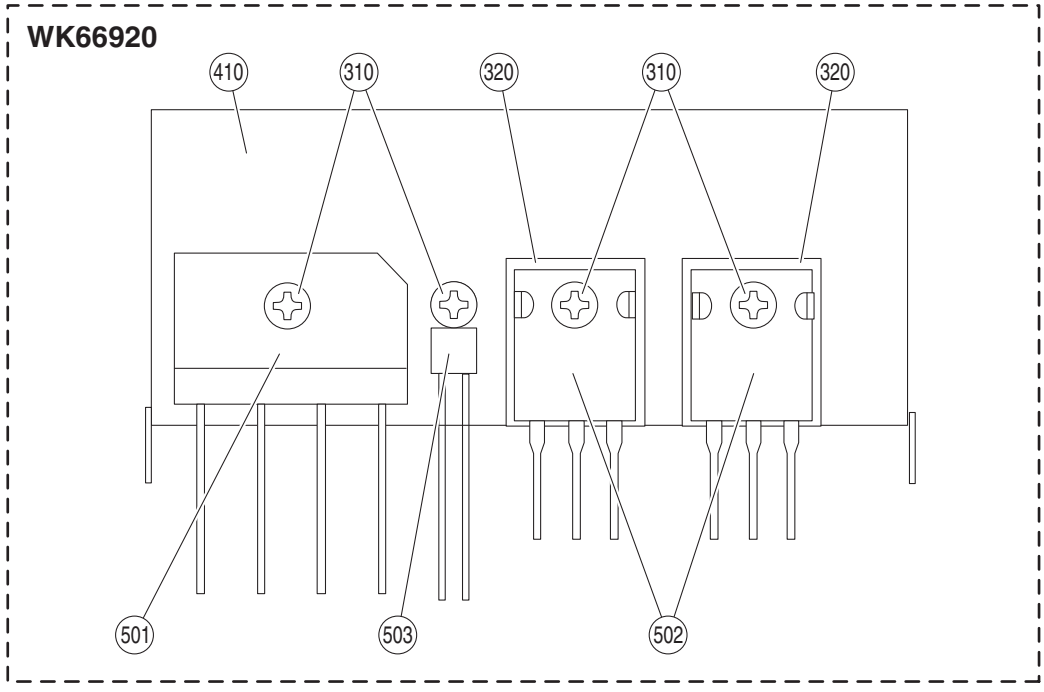
✻: New Parts

RANK: Japan only

# ■ HEAT SINK UNIT L100（ヒートシンクユニット L100）

**PSANL Circuit Board**



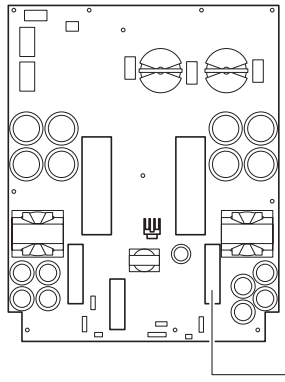

| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | | -- | HEAT SINK UNIT | AN-PA-HIGH 100mm | | (WK66920) | | |
| | 310 | -- | BIND HEAD SCREW | 3x10 MFZN2W3 | | (WE95290) | 4 | 01 |
| | 320 | -- | INSULATION SHEET | RSI T=0.07 | | (WB44860) | 2 | 01 |
| | 410 | -- | HEAT SINK PS | L100 ASSY | | (WM69000) | | |
| ⚠ | 501 | **WH268300** | DIODE STACK | RBV-3006 30A 600V | | | | 05 |
| | 502 | **WH268401** | IGBT | IRG4PC60UPBF | | | 2 | 12 |
| | 503 | -- | THERMISTOR | PTMS2331RP716 P7(85-C) | | (WH32400) | | 03 |

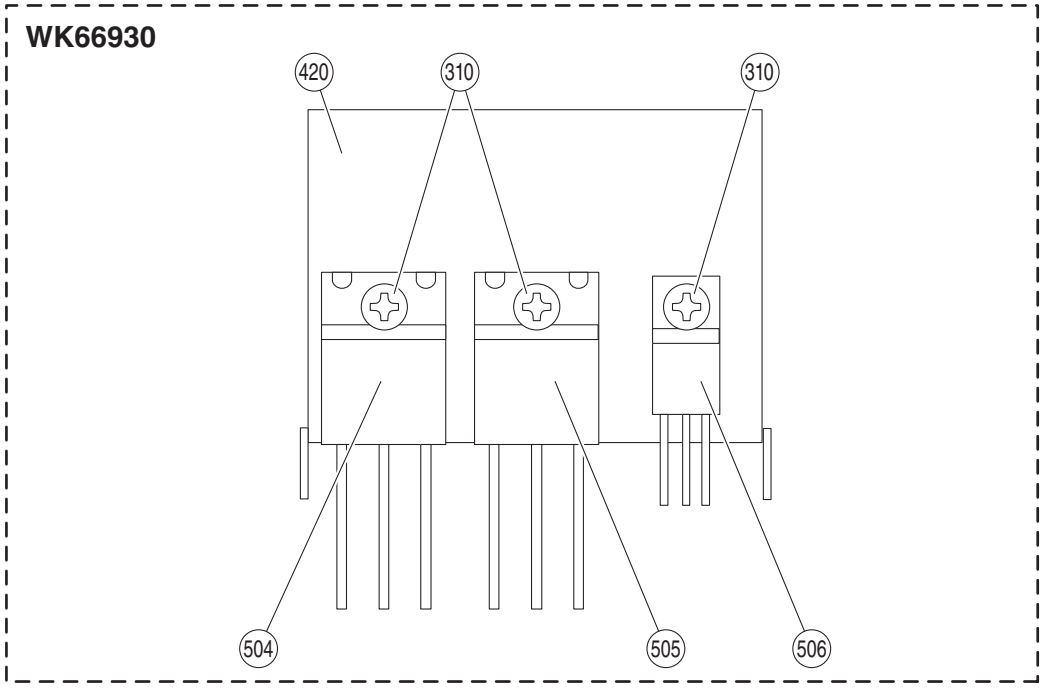
✻ : New Parts

RANK: Japan only

# ■ HEAT SINK UNIT L60（ヒートシンクユニット L60）

**PSANL Circuit Board**



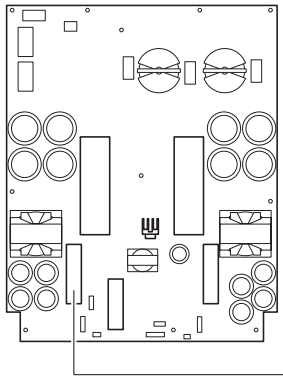

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| | -- | HEAT SINK UNIT | AN-PA-HIGH 60mm | | (WK66930) | | |
| 310 | -- | BIND HEAD SCREW | 3x10 MFZN2W3 | | (WE95290) | 3 | 01 |
| 420 | -- | HEAT SINK PS | L60 ASSY | | (WM69020) | | |
| 504 | -- | DIODE | FMU-36R 20A 600V | | (V849870) | | 04 |
| 505 | -- | DIODE STACK | FMU-36S 20A 600V | | (VN39950) | | 05 |
| 506 | -- | TRANSISTOR | 2SD2394 E,F ST | | (VS88340) | | 02 |

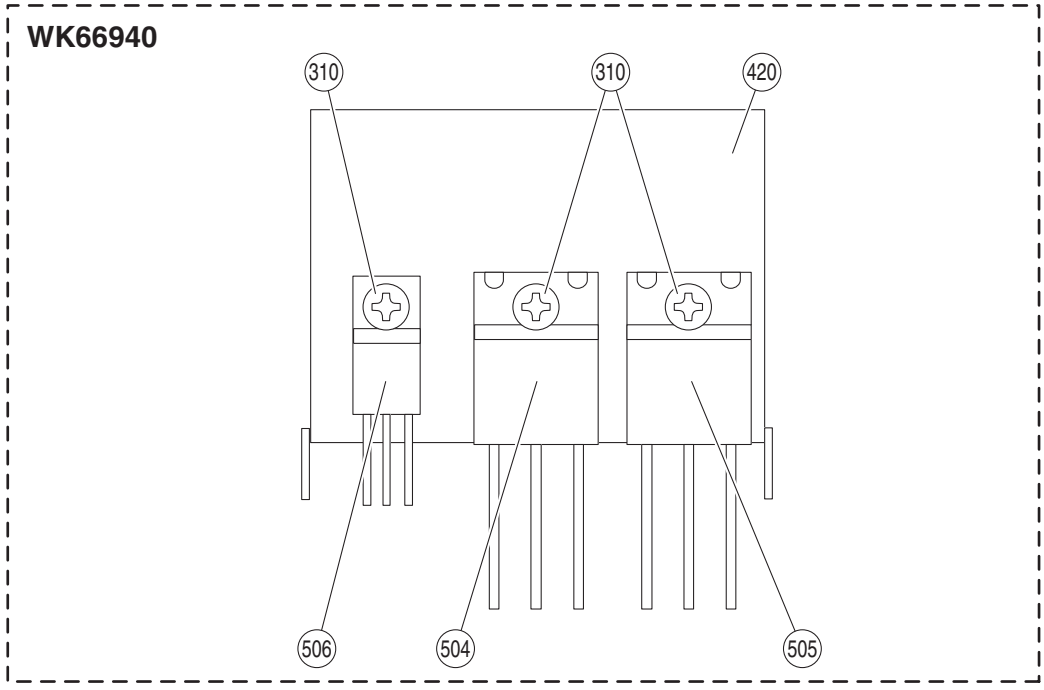
✻: New Parts

RANK: Japan only

# ■ HEAT SINK UNIT L60（ヒートシンクユニット L60）

**PSANL Circuit Board**



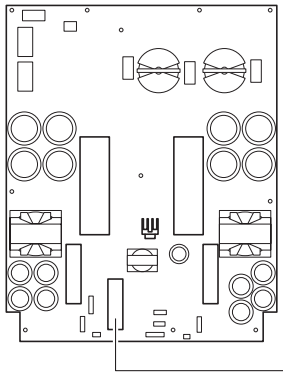

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| | -- | HEAT SINK UNIT | AN-PA-HIGH 60mm | | (WK66940) | | |
| 310 | -- | BIND HEAD SCREW | 3x10 MFZN2W3 | | (WE95290) | 3 | 01 |
| 420 | -- | HEAT SINK PS | L60 ASSY | | (WM69020) | | |
| 504 | -- | DIODE | FMU-36R 20A 600V | | (V849870) | | 04 |
| 505 | -- | DIODE STACK | FMU-36S 20A 600V | | (VN39950) | | 05 |
| 506 | -- | TRANSISTOR | 2SD2394 E,F ST | | (VS88340) | | 02 |

✻ : New Parts

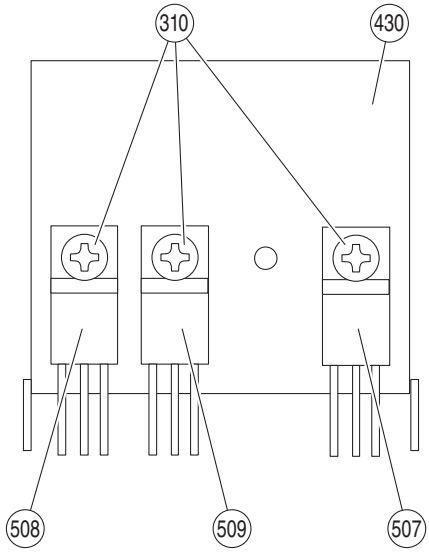
RANK: Japan only

# ■ HEAT SINK UNIT L50（ヒートシンクユニット L50）

**PSANL Circuit Board**




**WK66950**



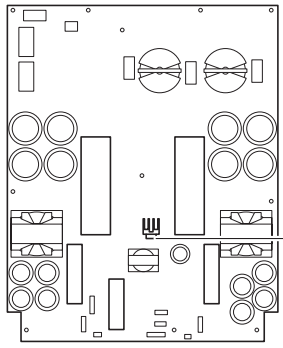

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | -- | HEAT SINK UNIT | AN-PA-HIGH 50mm | | | (WK66950) | | |
| 310 | -- | BIND HEAD SCREW | 3x10 MFZN2W3 | | | (WE95290) | 3 | 01 |
| 430 | -- | HEAT SINK PS | L50 ASSY | | | (WM69030) | | |
| 507 | -- | SCHOTTKY DIODE | 10A 60V SF10SC6 | | | (WF41740) | | 04 |
| 508 | -- | IC | NJM7815FA | | REGULATOR +15V | (XD853A0) | | 03 |
| 509 | -- | IC | NJM7915FA | | REGULATOR -15V | (XD854A0) | | 03 |

✻: New Parts

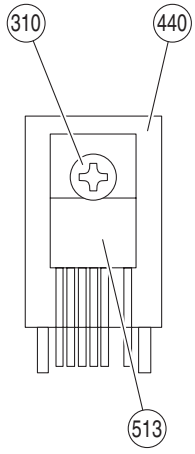
RANK: Japan only

# ■ HEAT SINK UNIT OSH（ヒートシンクユニット OSH）

**PSANL Circuit Board**




**WM44760**




| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| | -- | HEAT SINK UNIT | NX,TX6 25mm | | (WM44760) | | |
| 310 | -- | BIND HEAD SCREW | 3x10 MFZN2W3 | | (WE95290) | | 01 |
| 440 | -- | HEAT SINK | OSH-1625-SFL | | (WM45790) | | |
| 513 | -- | IC | TOP246YN IPD | | REGULATOR (X8576A0) | | 08 |

✻ : New Parts

RANK: Japan only

# ■ ELECTRICAL PARTS（電気部品）

| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | | | ELECTRICAL PARTS | | | NXAMP4x1 | | |
| * | | WR776600 | CIRCUIT BOARD | CONTROL | | (X8710D0) | | 59 |
| | | WJ972700 | CIRCUIT BOARD | INANL | | (WJ97330)(X8714C0) | | 26 |
| * | | WJ972901 | CIRCUIT BOARD | OUTANL | | (WJ97330)(X8714C0) | | 19 |
| * | | WT661200 | CIRCUIT BOARD | NX-DFLT | | (YC233A0) | | |
| | | WJ971500 | CIRCUIT BOARD | OPT-AN | | (WJ97170)(X8711E0) | | 16 |
| | | -- | CIRCUIT BOARD | PN-AN | | (WJ97170)(X8711E0)(WJ97130) | | 20 |
| * | | WJ971401 | CIRCUIT BOARD | RS232-GPI | | (WJ97170)(X8711E0) | | 16 |
| | | -- | CIRCUIT BOARD | LCD SPACER | | (WJ97170)(X8711E0)(WK62420) | | 08 |
| * | | WJ972500 | CIRCUIT BOARD | PAANL | | (WJ97310)(X8713D0) | | |
| * | | WJ974101 | CIRCUIT BOARD | PSANL | | J,U (X8715F0) | | 72 |
| * | | WJ974201 | CIRCUIT BOARD | PSANL | | CHN (X8715F0) | | 72 |
| | | | | | | | | |
| * | | WR776600 | CIRCUIT BOARD | CONTROL | | (X8710D0) | | 59 |
| | C001 | -- | MYLAR CAPACITOR (CHIP) | 2200pF 50V J | | (WB57540) | | |
| | -004 | -- | MYLAR CAPACITOR (CHIP) | 2200pF 50V J | | (WB57540) | | |
| | C005 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C006 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| | C007 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C008 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| | C009 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C010 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C011 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| | C012 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C013 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C014 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| | -017 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| | C018 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C019 | -- | ELECTROLYTIC CAP. | 22uF 25V | | (WC89280) | | 01 |
| | -022 | -- | ELECTROLYTIC CAP. | 22uF 25V | | (WC89280) | | 01 |
| | C027 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | -031 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C032 | -- | ELECTROLYTIC CAP.(CHIP) | 100uF 16V | | (UF03810) | | 01 |
| | C033 | -- | ELECTROLYTIC CAP.(CHIP) | 100uF 16V | | (UF03810) | | 01 |
| | C034 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C035 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C036 | -- | ELECTROLYTIC CAPACITOR (CHIP) | 1uF 50V | | (UF06610) | | 01 |
| | C037 | -- | ELECTROLYTIC CAPACITOR (CHIP) | 1uF 50V | | (UF06610) | | 01 |
| | C038 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| | -045 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| | C046 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | -049 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C050 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | -053 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C054 | -- | CERAMIC CAPACITOR-SL(CHIP) | 470pF 50V J | | (US06247) | | 01 |
| | -061 | -- | CERAMIC CAPACITOR-SL(CHIP) | 470pF 50V J | | (US06247) | | 01 |
| | C062 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C063 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C064 | -- | MYLAR CAPACITOR (CHIP) | 2700pF 50V J | | (WB57550) | | |
| | C065 | -- | MYLAR CAPACITOR (CHIP) | 2700pF 50V J | | (WB57550) | | |
| | C066 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C067 | -- | MYLAR CAPACITOR (CHIP) | 2700pF 50V J | | (WB57550) | | |
| | C068 | -- | MYLAR CAPACITOR (CHIP) | 2700pF 50V J | | (WB57550) | | |
| | C069 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C070 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | (US12610) | | 01 |
| | C071 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | (US12610) | | 01 |
| | C072 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | -075 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C076 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | (US12610) | | 01 |
| | C077 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | (US12610) | | 01 |
| | C079 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | (US12610) | | 01 |
| | C080 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | (US12610) | | 01 |
| | C081 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | -084 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C085 | -- | ELECTROLYTIC CAP.(CHIP) | 47uF 16V | | (UF03747) | | 01 |
| | C086 | -- | ELECTROLYTIC CAP.(CHIP) | 47uF 16V | | (UF03747) | | 01 |
| | C115 | -- | CERAMIC CAPACITOR-SL (CHIP) | 560pF 50V J | | (US06256) | | 01 |
| | -118 | -- | CERAMIC CAPACITOR-SL (CHIP) | 560pF 50V J | | (US06256) | | 01 |
| | C121 | -- | CERAMIC CAPACITOR-SL (CHIP) | 560pF 50V J | | (US06256) | | 01 |
| | -124 | -- | CERAMIC CAPACITOR-SL (CHIP) | 560pF 50V J | | (US06256) | | 01 |

*: New Parts

RANK: Japan only

# CONTROL

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| C131 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| -136 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C137 | -- | MYLAR CAPACITOR (CHIP) | 2200pF 50V J | | (WB57540) | | |
| -140 | -- | MYLAR CAPACITOR (CHIP) | 2200pF 50V J | | (WB57540) | | |
| C141 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| -150 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C151 | -- | CERAMIC CAPACITOR-B (CHIP) | 1000pF 50V K | | (US06310) | | 01 |
| C152 | -- | CERAMIC CAPACITOR-B (CHIP) | 1000pF 50V K | | (US06310) | | 01 |
| C153 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| -160 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C161 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| C162 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C163 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C164 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| C165 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| C189 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| -192 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| C193 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C194 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C195 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| -198 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| C199 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C200 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| -203 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| C204 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C205 | -- | MYLAR CAPACITOR (CHIP) | 0.01uF 50V J | | (WB57620) | | 01 |
| -212 | -- | MYLAR CAPACITOR (CHIP) | 0.01uF 50V J | | (WB57620) | | 01 |
| C213 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| -215 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C216 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| -219 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C220 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C221 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| -224 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| C225 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C226 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| -233 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C234 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C235 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| -242 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| C243 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| -245 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C246 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| -249 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C250 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| C251 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| -254 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | (UF06710) | | 01 |
| C255 | -- | CERAMIC CAPACITOR-CH(CHIP) | 12pF 50V J | | (US06112) | | 01 |
| C256 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C257 | -- | CERAMIC CAPACITOR-CH(CHIP) | 12pF 50V J | | (US06112) | | 01 |
| C258 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| -263 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C264 | -- | ELECTROLYTIC CAP.(CHIP) | 22uF 6.3V | | (UF01722) | | 01 |
| C265 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C266 | -- | CERAMIC CAPACITOR-B (CHIP) | 1500pF 50V K | | (US06315) | | 01 |
| C267 | -- | CERAMIC CAPACITOR-B (CHIP) | 1500pF 50V K | | (US06315) | | 01 |
| C268 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| -270 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C273 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C274 | -- | MONOLITHIC CERAMIC CAP. | 10uF 6.3V K | | (WG96940) | | 01 |
| C276 | -- | MONOLITHIC CERAMIC CAP. | 10uF 6.3V K | | (WG96940) | | 01 |
| -280 | -- | MONOLITHIC CERAMIC CAP. | 10uF 6.3V K | | (WG96940) | | 01 |
| C281 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| -284 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C285 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.047uF 16V K | | (US03447) | | 01 |
| C286 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C289 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C291 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C294 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C296 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |

✻ : New Parts

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# CONTROL

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| -306 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| C307 | -- | ELECTROLYTIC CAP.(CHIP) | 100uF 16V | | | (UF03810) | | 01 |
| C308 | -- | ELECTROLYTIC CAP.(CHIP) | 100uF 16V | | | (UF03810) | | 01 |
| C309 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| C311 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| -321 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| C330 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| -336 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| C337 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | | (US06410) | | 01 |
| C338 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| C339 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | | (US12610) | | 01 |
| C341 | -- | MYLAR CAPACITOR (CHIP) | 2200pF 50V J | | | (WB57540) | | |
| * -344 | -- | MYLAR CAPACITOR (CHIP) | 2200pF 50V J | | | (WB57540) | | |
| C345 | -- | CERAMIC CAPACITOR-B(CHIP) | 820pF 50V K | | | (US06282) | | 01 |
| -348 | -- | CERAMIC CAPACITOR-B(CHIP) | 820pF 50V K | | | (US06282) | | 01 |
| C349 | -- | CERAMIC CAPACITOR (CHIP) | 120pF 50V J | | | (US06212) | | 01 |
| -352 | -- | CERAMIC CAPACITOR (CHIP) | 120pF 50V J | | | (US06212) | | 01 |
| C353 | -- | ELECTROLYTIC CAP. | 22uF 25V | | | (WC89280) | | 01 |
| -356 | -- | ELECTROLYTIC CAP. | 22uF 25V | | | (WC89280) | | 01 |
| C357 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| C358 | -- | ELECTROLYTIC CAP.(CHIP) | 100uF 16V | | | (UF03810) | | 01 |
| C359 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | | (US12610) | | 01 |
| -362 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | | (US12610) | | 01 |
| C363 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | | (UF06710) | | 01 |
| C364 | -- | ELECTROLYTIC CAP. (CHIP) | 10uF 50V | | | (UF06710) | | 01 |
| C367 | -- | CERAMIC CAPACITOR-B (CHIP) | 1000pF 50V K | | | (US06310) | | 01 |
| -376 | -- | CERAMIC CAPACITOR-B (CHIP) | 1000pF 50V K | | | (US06310) | | 01 |
| C381 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| -384 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| C821 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| -831 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | | (WD96920) | | 01 |
| CN005 | -- | P.C.B CONNECTOR | HTSS 14P TE | | | (WN05930) | | |
| CN006 | -- | BASE POST CONNECTOR | PH 13P | | | (VT38940) | | 02 |
| CN007 | -- | CONNECTOR BASE POST | PH 11P TE | | | (VT38920) | | 01 |
| CN009 | -- | CONNECTOR | 30P TP FFC/FPC | | | (V441510) | | 02 |
| CN010 | -- | CONNECTOR | 30P TP FFC/FPC | | | (V441510) | | 02 |
| CN011 | -- | BASE POST CONNECTOR | PH 9P TE | | | (VT38900) | | 01 |
| CN012 | -- | BASE POST CONNECTOR | PH 5P TE | | | (VT38860) | | 01 |
| -015 | -- | BASE POST CONNECTOR | PH 5P TE | | | (VT38860) | | 01 |
| CN016 | -- | BASE POST CONNECTOR | PH 12P | | | (VT38930) | | 02 |
| CN017 | -- | CONNECTOR | FMN 40P | | | (WC19900) | | |
| D001 | -- | DIODE (CHIP) | RB160L-40 TE25 | | | (VS59760) | | 01 |
| -004 | -- | DIODE (CHIP) | RB160L-40 TE25 | | | (VS59760) | | 01 |
| D005 | -- | DIODE | SMP100LC-25 | | | (WJ52830) | | |
| D006 | -- | DIODE | SMP100LC-25 | | | (WJ52830) | | |
| DA001 | -- | DIODE ARRAY | DAN217 0.3A x2 | | | (VV55630) | | 01 |
| -036 | -- | DIODE ARRAY | DAN217 0.3A x2 | | | (VV55630) | | 01 |
| EM001 | -- | CHIP EMI FILTER | 31PT222Z1E9L TP | | | (VZ58110) | | 01 |
| -003 | -- | CHIP EMI FILTER | 31PT222Z1E9L TP | | | (VZ58110) | | 01 |
| IC001 | -- | IC | CS3318-CQZ | | VOLUME CONTROLER | (X8486A0) | | |
| IC002 | -- | IC | NJM2068M-D(TE2) | | OP AMP | (X3505A0) | | 02 |
| -005 | -- | IC | NJM2068M-D(TE2) | | OP AMP | (X3505A0) | | 02 |
| IC006 | -- | IC | NJM78M09DL1A(TE1) | | REGULATOR | (XZ940A0) | | 02 |
| IC007 | -- | IC | NJM79M09DL1A | | REGULATOR -9V | (X5366A0) | | 02 |
| IC008 | -- | IC | NJM2068M-D(TE2) | | OP AMP | (X3505A0) | | 02 |
| -011 | -- | IC | NJM2068M-D(TE2) | | OP AMP | (X3505A0) | | 02 |
| IC012 | -- | IC | CS4272-CZZR | | CODEC | (X8487A0) | | |
| IC013 | -- | IC | CS4272-CZZR | | CODEC | (X8487A0) | | |
| IC018 | -- | IC | NJM2068M-D(TE2) | | OP AMP | (X3505A0) | | 02 |
| -021 | -- | IC | NJM2068M-D(TE2) | | OP AMP | (X3505A0) | | 02 |
| IC022 | -- | IC | DSPB56371AF180 | | DSP | (X8489A0) | | |
| IC023 | -- | IC | DSPB56371AF180 | | DSP | (X8489A0) | | |
| IC024 | -- | IC | LD1117STR ADJUSTAB | | REGULATOR | (X8495A0) | | |
| IC028 | -- | IC | NJM2068M-D(TE2) | | OP AMP | (X3505A0) | | 02 |
| -034 | -- | IC | NJM2068M-D(TE2) | | OP AMP | (X3505A0) | | 02 |
| IC035 | -- | IC | PCM1803ADBR | | A/D CONVERTER | (X7357B0) | | 03 |
| -038 | -- | IC | PCM1803ADBR | | A/D CONVERTER | (X7357B0) | | 03 |
| IC039 | -- | IC | MX25L1605AM2C-12G | | FLASH MEMORY | (X8718A0) | | |
| IC039 | -- | IC | MX25L1605DM2I | | FLASH MEMORY | (X8718B0) | | |
| IC040 | -- | IC | SN74LVC00APWR NAND | | NAND | (X5406A0) | | 01 |

✻ : New Parts

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# CONTROL

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| IC041 | -- | IC | MAX3221CPWR | | RS-232C LINE DRIVER (X2757A0) | | 04 |
| IC042 | -- | IC | SN74LVC2G74DCTR FL | | FLIP FLOP (X8709A0) | | |
| IC043 | -- | IC | UPSD3354DV | | CPU (X9170C0) | | |
| IC044 | -- | IC | 74LVC169PW,118 4BI | | BINARY COUNTER (X8482A0) | | |
| IC045 | -- | IC | 74LVC169PW,118 4BI | | BINARY COUNTER (X8482A0) | | |
| IC046 | -- | IC | SN74LVC157APWR MUL | | DATA SELECTOR (X6786A0) | | |
| IC047 | -- | IC | NJM2904V(TE1) | | OP AMP (XR532A0) | | 02 |
| IC048 | -- | IC | NJM2904V(TE1) | | OP AMP (XR532A0) | | 02 |
| IC049 | -- | IC | SN74LV4052APWR | | DEMULTIPLEXER (X6976A0) | | 03 |
| IC050 | -- | IC | NJM2904V(TE1) | | OP AMP (XR532A0) | | 02 |
| IC051 | -- | IC | SN74LVC157APWR MUL | | DATA SELECTOR (X6786A0) | | |
| IC052 | -- | IC | NJM2904V(TE1) | | OP AMP (XR532A0) | | 02 |
| IC054 | -- | IC | SN74LVC245APWR | | BUS TRANSCEIVER (XZ287A0) | | 01 |
| IC055 | -- | IC | SN74LV541APWRBUS B | | BUFFER/DRIVER (X5966A0) | | 01 |
| IC056 | -- | IC | SN74LV541APWRBUS B | | BUFFER/DRIVER (X5966A0) | | 01 |
| IC057 | -- | IC | SN74LV273APWR D-FF | | D-TYPE FLIP FLOP (X5074A0) | | 01 |
| -061 | -- | IC | SN74LV273APWR D-FF | | D-TYPE FLIP FLOP (X5074A0) | | 01 |
| IC062 | -- | IC | SN74ABT245BNST-EL | | BUS TRANSCEIVER (XU009A0) | | 04 |
| IC063 | -- | IC | SN74LV14APWR | | INVERTER (X6688A0) | | 01 |
| IC064 | -- | IC | TC74LCX04FT(EL,K) | | INVERTER (X8415A0) | | |
| L001 | -- | COIL | 3.3uH | | (WG35380) | | 02 |
| L002 | -- | COIL | 3.3uH | | (WG35380) | | 02 |
| L005 | -- | COIL | 47uH | | (WH14400) | | |
| L006 | -- | INDUCTANCE (CHIP) | BLM18BD601SN1D | | (V306340) | | 01 |
| -010 | -- | INDUCTANCE (CHIP) | BLM18BD601SN1D | | (V306340) | | 01 |
| R001 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R002 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R003 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| R005 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| R007 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| R009 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| R011 | -- | CARBON RESISTOR (CHIP) | 18 1/16W J | | (RD35418) | | 01 |
| -014 | -- | CARBON RESISTOR (CHIP) | 18 1/16W J | | (RD35418) | | 01 |
| R015 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| -018 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| R019 | -- | METAL FILM RESISTOR (CHIP) | 10K 1/16W D | | (RF35710) | | 01 |
| -026 | -- | METAL FILM RESISTOR (CHIP) | 10K 1/16W D | | (RF35710) | | 01 |
| R027 | -- | METAL FILM RESISTOR (CHIP) | 680 1/16W D | | (RF35568) | | 01 |
| -034 | -- | METAL FILM RESISTOR (CHIP) | 680 1/16W D | | (RF35568) | | 01 |
| R035 | -- | METAL FILM RESISTOR (CHIP) | 100 1/16W D | | (RF35510) | | 01 |
| -042 | -- | METAL FILM RESISTOR (CHIP) | 100 1/16W D | | (RF35510) | | 01 |
| R043 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R044 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| -046 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| R047 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R048 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R049 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R050 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| -052 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| R053 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R054 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R075 | -- | CARBON RESISTOR (CHIP) | 3.0K 1/16W D | | (RF35630) | | 01 |
| -086 | -- | CARBON RESISTOR (CHIP) | 3.0K 1/16W D | | (RF35630) | | 01 |
| R087 | -- | CARBON RESISTOR (CHIP) | 1.5K 1/16W D | | (RF35615) | | 01 |
| -094 | -- | CARBON RESISTOR (CHIP) | 1.5K 1/16W D | | (RF35615) | | 01 |
| R095 | -- | CARBON RESISTOR (CHIP) | 3.0K 1/16W D | | (RF35630) | | 01 |
| -098 | -- | CARBON RESISTOR (CHIP) | 3.0K 1/16W D | | (RF35630) | | 01 |
| R099 | -- | METAL FILM RESISTOR (CHIP) | 5.1K 1/16W D | | (RF35651) | | 01 |
| -102 | -- | METAL FILM RESISTOR (CHIP) | 5.1K 1/16W D | | (RF35651) | | 01 |
| R107 | -- | METAL FILM RESISTOR (CHIP) | 5.1K 1/16W D | | (RF35651) | | 01 |
| -110 | -- | METAL FILM RESISTOR (CHIP) | 5.1K 1/16W D | | (RF35651) | | 01 |
| R121 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R122 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R123 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| -126 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| R127 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R128 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R129 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R130 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| -132 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |

✻ : New Parts

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## CONTROL

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| R133 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R134 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R135 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R136 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| -138 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R139 | -- | CARBON RESISTOR (CHIP) | 1.0 1/16W J | | (RD35310) | | 01 |
| R140 | -- | CARBON RESISTOR (CHIP) | 120 1/16W J | | (RD35512) | | 01 |
| R162 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RF45747) | | |
| -169 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RF45747) | | |
| R170 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| -173 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| R174 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| -177 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| R178 | -- | CARBON RESISTOR (CHIP) | 2.2K 1/16W D | | (RF35622) | | 01 |
| -181 | -- | CARBON RESISTOR (CHIP) | 2.2K 1/16W D | | (RF35622) | | 01 |
| R182 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| -193 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| R194 | -- | CARBON RESISTOR (CHIP) | 2.2K 1/16W D | | (RF35622) | | 01 |
| -197 | -- | CARBON RESISTOR (CHIP) | 2.2K 1/16W D | | (RF35622) | | 01 |
| R198 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| -201 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF35647) | | 01 |
| R202 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| -209 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R210 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| -213 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R214 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| R215 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R216 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| R217 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R218 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| R219 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R220 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| R221 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R222 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R223 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R224 | -- | CARBON RESISTOR (CHIP) | 1.0M 1/16W J | | (RD35910) | | 01 |
| R225 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R226 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R227 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R228 | -- | CARBON RESISTOR (CHIP) | 470 1/16W J | | (RD35547) | | 01 |
| R229 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R230 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| R231 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R232 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R233 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| R234 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R235 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| R236 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| R237 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R238 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W J | | (RD35733) | | 01 |
| R239 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R240 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W J | | (RD35733) | | 01 |
| -244 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W J | | (RD35733) | | 01 |
| R245 | -- | CARBON RESISTOR (CHIP) | 1.5K 1/16W J | | (RD35615) | | 01 |
| R246 | -- | CARBON RESISTOR (CHIP) | 1.5K 1/16W J | | (RD35615) | | 01 |
| R247 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R248 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R249 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| -251 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R253 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R254 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |
| -258 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |
| R259 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| -263 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| R264 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| -267 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R269 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R301 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| -303 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | (RD35433) | | 01 |
| R304 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |

✻ : New Parts

RANK: Japan only

# CONTROL, INANL and OUTANL

| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | -306 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |
| | R307 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RF45747) | | |
| | R308 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RF45747) | | |
| | R309 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| | -311 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| | R312 | -- | CARBON RESISTOR (CHIP) | 47 1/16W J | | (RD35447) | | 01 |
| | R313 | -- | CARBON RESISTOR (CHIP) | 47 1/16W J | | (RD35447) | | 01 |
| | R315 | -- | CARBON RESISTOR (CHIP) | 47 1/16W J | | (RD35447) | | 01 |
| | R317 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| | R318 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RD35747) | | 01 |
| | R319 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W D | | (RF35612) | | 01 |
| | -322 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W D | | (RF35612) | | 01 |
| | R323 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W D | | (RF35722) | | 01 |
| | -326 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W D | | (RF35722) | | 01 |
| | R327 | -- | METAL FILM RESISTOR (CHIP) | 5.1K 1/16W D | | (RF35651) | | 01 |
| | -330 | -- | METAL FILM RESISTOR (CHIP) | 5.1K 1/16W D | | (RF35651) | | 01 |
| | R334 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| | -338 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| | R339 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |
| | -341 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |
| | R342 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| | R343 | -- | CARBON RESISTOR (CHIP) | 220 1/16W J | | (RD35522) | | 01 |
| | R344 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | | (RD35533) | | 01 |
| | -350 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | | (RD35533) | | 01 |
| | R351 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RF45747) | | |
| | R352 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RF45747) | | |
| | R353 | -- | CARBON RESISTOR (CHIP) | 47 1/16W J | | (RD35447) | | 01 |
| | R354 | -- | CARBON RESISTOR (CHIP) | 47 1/16W J | | (RD35447) | | 01 |
| | R355 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | -358 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | RA001 | -- | RESISTOR ARRAY (CHIP) | 22x4 J | | (WG88990) | | 01 |
| | RA002 | -- | RESISTOR ARRAY (CHIP) | 22x4 J | | (WG88990) | | 01 |
| | RA003 | -- | RESISTOR ARRAY (CHIP) | 33x4 J | | (WG89030) | | 01 |
| | -008 | -- | RESISTOR ARRAY (CHIP) | 33x4 J | | (WG89030) | | 01 |
| | RA009 | -- | RESISTOR ARRAY (CHIP) | 150x4 J | | (WG89190) | | |
| | RA010 | -- | RESISTOR ARRAY (CHIP) | 150x4 J | | (WG89190) | | |
| | SW001 | -- | SWITCH | CHS-01 TA1 | | (V302690) | | 02 |
| | TH001 | -- | POLY SWITCH | MINI SMDC020F-2 | | (VZ42850) | | 02 |
| | TH002 | -- | POLY SWITCH | MINI SMDC020F-2 | | (VZ42850) | | 02 |
| | TH003 | -- | POLY SWITCH | MINISMDC110F/16-2 | | (V739430) | | 02 |
| | X001 | -- | QUARTZ CRYSTAL UNIT | 24.576MHz | | (V362570) | | 03 |
| | X003 | -- | QUARTZ CRYSTAL UNIT | 40.00MHz DSO321SR | | (WG97980) | | 04 |
| | | | | | | | | |
| | | WJ972700 | CIRCUIT BOARD | INANL | | (WJ97330)(X8714C0) | | 26 |
| * | | WJ972901 | CIRCUIT BOARD | OUTANL | | (WJ97330)(X8714C0) | | 19 |
| | | -- | EARTH FILM | AN-PA | | (WM02630) | | |
| | C701 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | -703 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C704 | -- | CERAMIC CAPACITOR-CH(CHIP) | 22pF 50V J | | (US06122) | | 01 |
| | -711 | -- | CERAMIC CAPACITOR-CH(CHIP) | 22pF 50V J | | (US06122) | | 01 |
| | C712 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| | -715 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| | C716 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C717 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| | -720 | -- | CERAMIC CAPACITOR-CH (CHIP) | 56pF 50V J | | (US06156) | | 01 |
| | C721 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C722 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C801 | -- | FILM CAPACITOR | 0.1uF 250V K | | (WB83390) | | 01 |
| | -808 | -- | FILM CAPACITOR | 0.1uF 250V K | | (WB83390) | | 01 |
| | C809 | -- | MONOLITHIC CERAMIC CAP. | 1000pF 250V K | | (WJ83500) | | 01 |
| | -816 | -- | MONOLITHIC CERAMIC CAP. | 1000pF 250V K | | (WJ83500) | | 01 |
| | C817 | -- | CERAMIC CAPACITOR (CHIP) | 2200pF 250V K | | (WH15840) | | 01 |
| | -824 | -- | CERAMIC CAPACITOR (CHIP) | 2200pF 250V K | | (WH15840) | | 01 |
| | C829 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | -832 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C833 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C834 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C835 | -- | MONOLITHIC CERAMIC CAP. | 4700pF 630V K | | (VZ56240) | | 01 |
| | -842 | -- | MONOLITHIC CERAMIC CAP. | 4700pF 630V K | | (VZ56240) | | 01 |
| | C843 | -- | MONOLITHIC CERAMIC CAP. | 1000pF 630V K | | (VZ58560) | | 01 |

✻ : New Parts

RANK: Japan only

# INANL, OUTANL and NX-DFLT

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| -846 | -- | MONOLITHIC CERAMIC CAP. | 1000pF 630V K | | (VZ58560) | | 01 |
| CN805 | -- | FASTEN TERMINAL | 16611BL-2 | | (WA76770) | | |
| -808 | -- | FASTEN TERMINAL | 16611BL-2 | | (WA76770) | | |
| CN809 | -- | CONNECTOR BASE POST | PH 16P TE | | (VF28340) | | 01 |
| CN810 | -- | CONNECTOR BASE POST | PH 4P TE | | (VB39000) | | 01 |
| D701 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| -708 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| D801 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| -804 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| IC701 | -- | IC | NJM2068M-D(TE2) | OP AMP | (X3505A0) | | 02 |
| IC702 | -- | IC | NJM2068M-D(TE2) | OP AMP | (X3505A0) | | 02 |
| IC801 | -- | IC | NJM2068M-D(TE2) | OP AMP | (X3505A0) | | 02 |
| IC802 | -- | IC | NJM2068M-D(TE2) | OP AMP | (X3505A0) | | 02 |
| JK701 | -- | CANNON CONNECTOR | JACK NC3FBV1 | CH1 INPUT | (V986210) | | 05 |
| JK702 | -- | CANNON CONNECTOR | JACK NC3FBV1 | CH2 INPUT | (V986210) | | 05 |
| JK703 | -- | CANNON CONNECTOR | JACK NC3FBV1 | CH3 INPUT | (V986210) | | 05 |
| JK704 | -- | CANNON CONNECTOR | JACK NC3FBV1 | CH4 INPUT | (V986210) | | 05 |
| JK705 | -- | CANNON CONNECTOR | JACK NC3MBV | CH1 LINKOUT | (WJ45920) | | 06 |
| JK706 | -- | CANNON CONNECTOR | JACK NC3MBV | CH2 LINKOUT | (WJ45920) | | 06 |
| JK707 | -- | CANNON CONNECTOR | JACK NC3MBV | CH3 LINKOUT | (WJ45920) | | 06 |
| JK708 | -- | CANNON CONNECTOR | JACK NC3MBV | CH4 LINKOUT | (WJ45920) | | 06 |
| K801 | -- | TERMINAL PLATE | B88 | | (WE67930) | | |
| L801 | -- | COIL | 1.9uH 15x10 | | (WD40870) | | |
| -804 | -- | COIL | 1.9uH 15x10 | | (WD40870) | | |
| Q801 | -- | DIGITAL TRANSISTOR | KRC105S-RTK/P | | (WS50920) | | |
| -804 | -- | DIGITAL TRANSISTOR | KRC105S-RTK/P | | (WS50920) | | |
| R701 | -- | THICK FILM RESISTOR (CHIP) | 10K 1/10W D | | (RD55710) | | 01 |
| -708 | -- | THICK FILM RESISTOR (CHIP) | 10K 1/10W D | | (RD55710) | | 01 |
| R709 | -- | THICK FILM RESISTOR (CHIP) | 2.0K 1/10W D | | (RD55620) | | |
| -716 | -- | THICK FILM RESISTOR (CHIP) | 2.0K 1/10W D | | (RD55620) | | |
| R717 | -- | CARBON RESISTOR (CHIP) | 120 1/16W J | | (RD35512) | | 01 |
| -720 | -- | CARBON RESISTOR (CHIP) | 120 1/16W J | | (RD35512) | | 01 |
| R801 | -- | METAL OXIDE FILM RESISTOR | 2.2 3W J | | (WK91630) | | 01 |
| -804 | -- | METAL OXIDE FILM RESISTOR | 2.2 3W J | | (WK91630) | | 01 |
| R805 | -- | METAL OXIDE FILM RESISTOR | 4.7 3W J | | (WD40710) | | |
| -808 | -- | METAL OXIDE FILM RESISTOR | 4.7 3W J | | (WD40710) | | |
| R809 | -- | FLAME PROOF C. RESISTOR | 4.7 1/4W J | | (HV75347) | | 01 |
| -812 | -- | FLAME PROOF C. RESISTOR | 4.7 1/4W J | | (HV75347) | | 01 |
| R813 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| -815 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| R816 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF45647) | | |
| R817 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| -819 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| R820 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF45647) | | |
| R821 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| -823 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| R824 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF45647) | | |
| R825 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| -827 | -- | CARBON RESISTOR (CHIP) | 33K 1/16W D | | (RF45733) | | 01 |
| R828 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF45647) | | |
| R829 | -- | CARBON RESISTOR (CHIP) | 18 1/16W J | | (RD35418) | | 01 |
| -832 | -- | CARBON RESISTOR (CHIP) | 18 1/16W J | | (RD35418) | | 01 |
| R837 | -- | FLAME PROOF C. RESISTOR | 1.0 1/4W J | | (HV75310) | | 01 |
| -840 | -- | FLAME PROOF C. RESISTOR | 1.0 1/4W J | | (HV75310) | | 01 |
| RY801 | -- | RELAY | DC DI24D1-O(M) | | (WJ56900) | | 05 |
| RY803 | -- | RELAY | DC DI24D1-O(M) | | (WJ56900) | | 05 |
| RY805 | -- | RELAY | DC DI24D1-O(M) | | (WJ56900) | | 05 |
| RY807 | -- | RELAY | DC DI24D1-O(M) | | (WJ56900) | | 05 |
| SP801 | -- | RECEPTACLE CONNECTOR | 4P NL4MD-H | Speakon A | (V818170) | | 06 |
| SP802 | -- | RECEPTACLE CONNECTOR | 4P NL4MD-H | Speakon B | (V818170) | | 06 |
| SP803 | -- | RECEPTACLE CONNECTOR | 4P NL4MD-H | Speakon C | (V818170) | | 06 |
| SP804 | -- | RECEPTACLE CONNECTOR | 4P NL4MD-H | Speakon D | (V818170) | | 06 |
| W701 | -- | CONNECTOR ASSEMBLY SIG-IN | B&C 13P 330mm | | (WK02070) | | |
| W801 | -- | CONNECTOR ASSEMBLY OUTPS | B&C TUBE 5P 420mm | | (WK14200) | | |
| W802 | -- | CONNECTOR ASSEMBLY | B&C 1P 530mm BK | | (WK16820) | | 03 |
| W805 | -- | CONNECTOR ASSEMBLY | B&C 1P 530mm BK | | (WK16820) | | 03 |
| XX801 | -- | CURRENT SENSOR | L18P020D15 | | (WJ45850) | | |
| -804 | -- | CURRENT SENSOR | L18P020D15 | | (WJ45850) | | |
| | | | | | | | |
| * | WT661200 | CIRCUIT BOARD | NX-DFLT | | (YC233A0) | | |

✻: New Parts

RANK: Japan only

# NX-DFLT, OPT-AN, PN-AN and RS232-GPI

| | REF NO. | PART NO. | DESCRIPTION | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| | | -- | LED SPACER | LDS-45B L=4.5 | (WJ35070) | | |
| | C001 | -- | CERAMIC CAPACITOR-F (CHIP) | 0.1uF 50V Z | (US06510) | | |
| | -011 | -- | CERAMIC CAPACITOR-F (CHIP) | 0.1uF 50V Z | (US06510) | | |
| | CN001 | -- | CONNECTOR | PHEC 80P SE | (WT66950) | | |
| | K001 | -- | SCREW TERMINAL | M3 8.3x13 M1698 | (BB07136) | | |
| | K002 | -- | SCREW TERMINAL | M3 8.3x13 M1698 | (BB07136) | | |
| | LD001 | -- | LED GREEN | SLR-332MG3F | (V561690) | | |
| | R001 | -- | CARBON RESISTOR (CHIP) | 56 1W J | (WT66810) | | |
| | -010 | -- | CARBON RESISTOR (CHIP) | 56 1W J | (WT66810) | | |
| | R011 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | (RD35510) | | |
| | R012 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | (RD35510) | | |
| | R013 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | (RD35433) | | |
| | | | | | | | |
| | | WJ971500 | CIRCUIT BOARD | OPT-AN | (WJ97170)(X8711E0) | | 16 |
| | | -- | CIRCUIT BOARD | PN-AN | (WJ97170)(X8711E0)(WJ97130) | | 20 |
| * | | WJ971401 | CIRCUIT BOARD | RS232-GPI | (WJ97170)(X8711E0) | | 16 |
| | | -- | CIRCUIT BOARD | LCD SPACER | (WJ97170)(X8711E0)(WK62420) | | 08 |
| | C001 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | (US06410) | | 01 |
| | -003 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | (US06410) | | 01 |
| | C004 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.047uF 16V K | (US03447) | | 01 |
| | C005 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | (WD96920) | | 01 |
| | -009 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | (WD96920) | | 01 |
| | C010 | -- | CERAMIC CAPACITOR-SL(CHIP) | 100pF 50V J | (US06210) | | 01 |
| | C201 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | (WD96920) | | 01 |
| | -203 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | (WD96920) | | 01 |
| | CN001 | -- | FFC CONNECTOR | 52271-3079 P=1mm | (WJ85350) | | 03 |
| | CN002 | -- | CONNECTOR | MTLW 16P | (WK74020) | | |
| | CN201 | -- | FFC CONNECTOR | 52271-3079 P=1mm | (WJ85350) | | 03 |
| | CN202 | -- | D SUB CONNECTOR | J 9P | RS232 (WK51820) | | 06 |
| | CN203 | -- | D SUB CONNECTOR | J 25P | GPI (WK51830) | | |
| | CN301 | -- | CONNECTOR | FMN 40P | (WC19900) | | |
| | CN302 | -- | CONNECTOR PLUG | PHEC 80P TE | (V915200) | | 05 |
| | EC001 | -- | ROTARY ENCODER | EC11B20204AP | ENCODER (WK80260) | | 05 |
| | EM201 | -- | EMI FILTER (CHIP) | NFM3DCC101U1H3L | (VQ76140) | | 01 |
| | EM202 | -- | LC FILTER | NFA31CC101S1E4D | (WC39150) | | 01 |
| | -205 | -- | LC FILTER | NFA31CC101S1E4D | (WC39150) | | 01 |
| | IC001 | -- | IC | SN74LV541APWRBUS B | BUFFER/DRIVER (X5966A0) | | 01 |
| | IC002 | -- | IC | 74HCT273PW,118 D-F | D-TYPE FLIP FLOP (X8681A0) | | 03 |
| | IC003 | -- | IC | 74HCT273PW,118 D-F | D-TYPE FLIP FLOP (X8681A0) | | 03 |
| | IC004 | -- | IC | 74HCT4514PW,118 4T | DECODER/DEMULTIPLEXER (X8630A0) | | |
| | -007 | -- | IC | 74HCT4514PW,118 4T | DECODER/DEMULTIPLEXER (X8630A0) | | |
| | LD001 | -- | LED GREEN (CHIP) | GREEN SML-512MW | SIGNAL-CH1 (WJ83350) | | 01 |
| | LD002 | -- | LED GREEN (CHIP) | GREEN SML-512MW | SIGNAL-CH2 (WJ83350) | | 01 |
| | LD003 | -- | LED GREEN (CHIP) | GREEN SML-512MW | SIGNAL-CH3 (WJ83350) | | 01 |
| | LD004 | -- | LED GREEN (CHIP) | GREEN SML-512MW | SIGNAL-CH4 (WJ83350) | | 01 |
| | LD005 | -- | LED YELLOW (CHIP) | YELLOW SML-512WW | PROTECT-CH1 (WG96210) | | 01 |
| | LD006 | -- | LED YELLOW (CHIP) | YELLOW SML-512WW | PROTECT-CH2 (WG96210) | | 01 |
| | LD007 | -- | LED YELLOW (CHIP) | YELLOW SML-512WW | PROTECT-CH3 (WG96210) | | 01 |
| | LD008 | -- | LED YELLOW (CHIP) | YELLOW SML-512WW | PROTECT-CH4 (WG96210) | | 01 |
| | LD009 | -- | LED RED (CHIP) | SML-512UW | PEAK-CH1 (WD11160) | | 01 |
| | LD010 | -- | LED RED (CHIP) | SML-512UW | PEAK-CH2 (WD11160) | | 01 |
| | LD011 | -- | LED RED (CHIP) | SML-512UW | PEAK-CH3 (WD11160) | | 01 |
| | LD012 | -- | LED RED (CHIP) | SML-512UW | PEAK-CH4 (WD11160) | | 01 |
| | LD013 | -- | LED GREEN (CHIP) | GREEN SML-512MW | POWER (WJ83350) | | 01 |
| | LD014 | -- | LED YELLOW (CHIP) | YELLOW SML-512WW | STANDBY (WG96210) | | 01 |
| | LD015 | -- | LED RED (CHIP) | SML-512UW | AMP-PROTECT (WD11160) | | 01 |
| | LD016 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL1 (WK27910) | | |
| | LD017 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL2 (WK27910) | | |
| | LD018 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL3 (WK27910) | | |
| | LD019 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL4 (WK27910) | | |
| | LD020 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL5 (WK27910) | | |
| | LD021 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL6 (WK27910) | | |
| | LD022 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL7 (WK27910) | | |
| | LD023 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL8 (WK27910) | | |
| | LD024 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL9 (WK27910) | | |
| | LD025 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL10 (WK27910) | | |
| | LD026 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL11 (WK27910) | | |
| | LD027 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | CH1-VOL12 (WK27910) | | |

✻ : New Parts

RANK: Japan only

## OPT-AN, PN-AN and RS232-GPI

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| LD028 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH1-VOL13 | (WK27910) | | |
| LD029 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH1-VOL14 | (WK27910) | | |
| LD030 | -- | LED BLUE (CHIP) | BLUE SMLE12BC7T | | CH1-VOL15 | (WK15110) | | |
| LD032 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL1 | (WK27910) | | |
| LD033 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL2 | (WK27910) | | |
| LD034 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL3 | (WK27910) | | |
| LD035 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL4 | (WK27910) | | |
| LD036 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL5 | (WK27910) | | |
| LD037 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL6 | (WK27910) | | |
| LD038 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL7 | (WK27910) | | |
| LD039 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL8 | (WK27910) | | |
| LD040 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL9 | (WK27910) | | |
| LD041 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL10 | (WK27910) | | |
| LD042 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL11 | (WK27910) | | |
| LD043 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL12 | (WK27910) | | |
| LD044 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL13 | (WK27910) | | |
| LD045 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH2-VOL14 | (WK27910) | | |
| LD046 | -- | LED BLUE (CHIP) | BLUE SMLE12BC7T | | CH2-VOL15 | (WK15110) | | |
| LD048 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL1 | (WK27910) | | |
| LD049 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL2 | (WK27910) | | |
| LD050 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL3 | (WK27910) | | |
| LD051 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL4 | (WK27910) | | |
| LD052 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL5 | (WK27910) | | |
| LD053 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL6 | (WK27910) | | |
| LD054 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL7 | (WK27910) | | |
| LD055 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL8 | (WK27910) | | |
| LD056 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL9 | (WK27910) | | |
| LD057 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL10 | (WK27910) | | |
| LD058 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL11 | (WK27910) | | |
| LD059 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL12 | (WK27910) | | |
| LD060 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL13 | (WK27910) | | |
| LD061 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH3-VOL14 | (WK27910) | | |
| LD062 | -- | LED BLUE (CHIP) | BLUE SMLE12BC7T | | CH3-VOL15 | (WK15110) | | |
| LD064 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL1 | (WK27910) | | |
| LD065 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL2 | (WK27910) | | |
| LD066 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL3 | (WK27910) | | |
| LD067 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL4 | (WK27910) | | |
| LD068 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL5 | (WK27910) | | |
| LD069 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL6 | (WK27910) | | |
| LD070 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL7 | (WK27910) | | |
| LD071 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL8 | (WK27910) | | |
| LD072 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL9 | (WK27910) | | |
| LD073 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL10 | (WK27910) | | |
| LD074 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL11 | (WK27910) | | |
| LD075 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL12 | (WK27910) | | |
| LD076 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL13 | (WK27910) | | |
| LD077 | -- | LED WHITE (CHIP) | WHITE SMLE12WBC7W | | CH4-VOL14 | (WK27910) | | |
| LD078 | -- | LED BLUE (CHIP) | BLUE SMLE12BC7T | | CH4-VOL15 | (WK15110) | | |
| R001 | -- | CARBON RESISTOR (CHIP) | 330 1/4W J | | | (RD15533) | | 01 |
| -004 | -- | CARBON RESISTOR (CHIP) | 330 1/4W J | | | (RD15533) | | 01 |
| R005 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | | (RD35710) | | 01 |
| -014 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | | (RD35710) | | 01 |
| R015 | -- | CARBON RESISTOR (CHIP) | 150 1/4W J | | | (RD15515) | | |
| -018 | -- | CARBON RESISTOR (CHIP) | 150 1/4W J | | | (RD15515) | | |
| R019 | -- | CARBON RESISTOR (CHIP) | 220 1/4W J | | | (RD15522) | | |
| -026 | -- | CARBON RESISTOR (CHIP) | 220 1/4W J | | | (RD15522) | | |
| R027 | -- | CARBON RESISTOR (CHIP) | 150 1/4W J | | | (RD15515) | | |
| R028 | -- | CARBON RESISTOR (CHIP) | 220 1/4W J | | | (RD15522) | | |
| R029 | -- | CARBON RESISTOR (CHIP) | 220 1/4W J | | | (RD15522) | | |
| R030 | -- | CARBON RESISTOR (CHIP) | 56 1/16W J | | | (RD35456) | | 01 |
| R031 | -- | CARBON RESISTOR (CHIP) | 56 1/16W J | | | (RD35456) | | 01 |
| R033 | -- | CARBON RESISTOR (CHIP) | 680 1/16W J | | | (RD35568) | | 01 |
| -092 | -- | CARBON RESISTOR (CHIP) | 680 1/16W J | | | (RD35568) | | 01 |
| R101 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | | | (RD35533) | | 01 |
| -110 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | | | (RD35533) | | 01 |
| R111 | -- | CARBON RESISTOR (CHIP) | 330 1/4W J | | | (RD15533) | | 01 |
| -114 | -- | CARBON RESISTOR (CHIP) | 330 1/4W J | | | (RD15533) | | 01 |
| R115 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | | (RD35433) | | 01 |
| -117 | -- | CARBON RESISTOR (CHIP) | 33 1/16W J | | | (RD35433) | | 01 |
| R118 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | | (RD35000) | | 01 |

✻ : New Parts

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# OPT-AN, PN-AN, RS232-GPI and PAANL

| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | RA001 | -- | RESISTOR ARRAY (CHIP) | 150x4 J | | (WG89190) | | |
| | -012 | -- | RESISTOR ARRAY (CHIP) | 150x4 J | | (WG89190) | | |
| | SW001 | -- | TACT SWITCH | SKRGAED010 | VOL-A | (WE95200) | | 01 |
| | SW002 | -- | TACT SWITCH | SKRGAED010 | VOL-B | (WE95200) | | 01 |
| | SW003 | -- | PUSH SWITCH | LS22BB-2UR/UR-T | MUTE-CH1 | (WK74000) | | |
| | SW004 | -- | PUSH SWITCH | LS22BB-2UR/UR-T | MUTE-CH2 | (WK74000) | | |
| | SW005 | -- | PUSH SWITCH | LS22BB-2UR/UR-T | MUTE-CH3 | (WK74000) | | |
| | SW006 | -- | PUSH SWITCH | LS22BB-2UR/UR-T | MUTE-CH4 | (WK74000) | | |
| | SW007 | -- | TACT SWITCH | SKRGAED010 | SELECT-CH1 | (WE95200) | | 01 |
| | SW008 | -- | TACT SWITCH | SKRGAED010 | SELECT-CH2 | (WE95200) | | 01 |
| | SW009 | -- | TACT SWITCH | SKRGAED010 | SELECT-CH3 | (WE95200) | | 01 |
| | SW010 | -- | TACT SWITCH | SKRGAED010 | SELECT-CH4 | (WE95200) | | 01 |
| | | | | | | | | |
| * | | WJ972500 | CIRCUIT BOARD | PAANL | | (I1142)(X8713D0) | | |
| | C401 | -- | ELECTROLYTIC CAP. | 1.0uF 50V | | (UR86610) | | 01 |
| | C402 | -- | MYLAR CAPACITOR | 1500pF 50V J | | (UA65315) | | 01 |
| | C402 | -- | MYLAR CAPACITOR | 1500pF 50V J | | (UA35315) | | |
| | C403 | -- | MYLAR CAPACITOR | 1500pF 50V J | | (UA65315) | | 01 |
| | C403 | -- | MYLAR CAPACITOR | 1500pF 50V J | | (UA35315) | | |
| | C404 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C407 | -- | ELECTROLYTIC CAP. | 470uF 10V | | (UU22847) | | 01 |
| | C408 | -- | ELECTROLYTIC CAP. | 470uF 10V | | (UU22847) | | 01 |
| | C409 | -- | CERAMIC CAPACITOR-CH (DISC) | 22pF 500V C | | (WG21170) | | |
| | C410 | -- | MYLAR CAPACITOR | 4700pF 50V J | | (UA65347) | | 01 |
| | C410 | -- | MYLAR CAPACITOR | 4700pF 50V J | | (UA35347) | | 01 |
| | C411 | -- | CERAMIC CAPACITOR-CH (DISC) | 22pF 500V C | | (WG21170) | | |
| | C412 | -- | MYLAR CAPACITOR | 4700pF 50V J | | (UA65347) | | 01 |
| | C412 | -- | MYLAR CAPACITOR | 4700pF 50V J | | (UA35347) | | 01 |
| | C413 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C414 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C415 | -- | MONOLITHIC CERAMIC CAP. | 22pF 630V J | | (WJ59260) | | 01 |
| | C416 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C417 | -- | MONOLITHIC CERAMIC CAP. | 22pF 630V J | | (WJ59260) | | 01 |
| | C418 | -- | MONOLITHIC CERAMIC CAP. | 22pF 630V J | | (WJ59260) | | 01 |
| | C419 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C420 | -- | MONOLITHIC CERAMIC CAP. | 22pF 630V J | | (WJ59260) | | 01 |
| | C421 | -- | ELECTROLYTIC CAPACITOR | 4.7uF 100V | | (UR89647) | | 01 |
| | -424 | -- | ELECTROLYTIC CAPACITOR | 4.7uF 100V | | (UR89647) | | 01 |
| | C425 | -- | MONOLITHIC MYLAR CAPACITOR | 0.1uF 50V | | (VR16830) | | 01 |
| | -428 | -- | MONOLITHIC MYLAR CAPACITOR | 0.1uF 50V | | (VR16830) | | 01 |
| | C429 | -- | MONOLITHIC CERAMIC CAP. | 22pF 630V J | | (WJ59260) | | 01 |
| | -432 | -- | MONOLITHIC CERAMIC CAP. | 22pF 630V J | | (WJ59260) | | 01 |
| | C433 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA35410) | | 01 |
| | C433 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA65410) | | 01 |
| | C434 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA65410) | | 01 |
| | C434 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA35410) | | 01 |
| | C435 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA65410) | | 01 |
| | C435 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA35410) | | 01 |
| | C436 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA35410) | | 01 |
| | C436 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA65410) | | 01 |
| | C437 | -- | ELECTROLYTIC CAP. | 2.2uF 250V | | (WJ45880) | | 01 |
| | C438 | -- | ELECTROLYTIC CAP. | 2.2uF 250V | | (WJ45880) | | 01 |
| | C439 | -- | MONOLITHIC CERAMIC CAP. | 100pF 250V J | | (WJ59270) | | 01 |
| | C440 | -- | MONOLITHIC CERAMIC CAP. | 100pF 250V J | | (WJ59270) | | 01 |
| | C441 | -- | POLYPROPYLENE CAPACITOR | 3.3uF 250V J | | (WJ45970) | | 06 |
| | C442 | -- | POLYPROPYLENE CAPACITOR | 3.3uF 250V J | | (WJ45970) | | 06 |
| | C443 | -- | CERAMIC CAPACITOR (CHIP) | 2200pF 250V K | | (WH15840) | | 01 |
| | C444 | -- | CERAMIC CAPACITOR (CHIP) | 2200pF 250V K | | (WH15840) | | 01 |
| | C445 | -- | ELECTROLYTIC CAP. | 220uF 25V | | (WF20450) | | 01 |
| | C446 | -- | ELECTROLYTIC CAP. | 47uF 35V | | (UR85747) | | 01 |
| | C447 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C448 | -- | ELECTROLYTIC CAP. | 100uF 35V | | (UR85810) | | 01 |
| | C449 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA35410) | | 01 |
| | C449 | -- | MYLAR CAPACITOR | 0.01uF 50V J | | (UA65410) | | 01 |
| | C450 | -- | MONOLITHIC CERAMIC CAP. | 100pF 250V J | | (WJ59270) | | 01 |
| | C451 | -- | MONOLITHIC CERAMIC CAP. | 100pF 250V J | | (WJ59270) | | 01 |
| | C452 | -- | ELECTROLYTIC CAP. | 150uF 160V | | (WK76610) | | |
| | C453 | -- | ELECTROLYTIC CAP. | 150uF 160V | | (WK76610) | | |
| | C454 | -- | ELECTROLYTIC CAP. | 2.2uF 250V | | (WJ45880) | | 01 |
| | C455 | -- | ELECTROLYTIC CAP. | 2.2uF 250V | | (WJ45880) | | 01 |

✻ : New Parts

RANK: Japan only

## PAANL

| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| C456 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| C457 | -- | ELECTROLYTIC CAP. | 2.2uF 250V | | (WJ45880) | | 01 |
| -460 | -- | ELECTROLYTIC CAP. | 2.2uF 250V | | (WJ45880) | | 01 |
| C461 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| CN401 | -- | CONNECTOR, BASE POST | PH 5P TE | | (VB39010) | | 01 |
| CN403 | -- | CONNECTOR, BASE POST | PH 5P TE | | (VB39010) | | 01 |
| CN405 | -- | CONNECTOR, BASE POST | PH 2P TE | | (VB38980) | | 01 |
| CN406 | -- | CONNECTOR, BASE POST | PH 2P TE | | (VB38980) | | 01 |
| D401 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| -404 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| D405 | -- | ZENER DIODE | UDZS3.9B 3.9V | | (VU17160) | | 01 |
| D406 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| D407 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| D408 | -- | ZENER DIODE | UDZS3.9B 3.9V | | (VU17160) | | 01 |
| D409 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| -414 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| D415 | -- | ZENER DIODE | UDZS3.9B 3.9V | | (VU17160) | | 01 |
| D416 | -- | ZENER DIODE | UDZS6.8BTE-17 6.8V | | (VU17220) | | 01 |
| D417 | -- | DIODE (CHIP) | HSU83 TRF -E | | (WD84430) | | |
| D418 | -- | DIODE (CHIP) | HSU83 TRF -E | | (WD84430) | | |
| D419 | -- | ZENER DIODE | UDZS6.8BTE-17 6.8V | | (VU17220) | | 01 |
| D420 | -- | ZENER DIODE | UDZS3.9B 3.9V | | (VU17160) | | 01 |
| D421 | -- | ZENER DIODE | UDZS3.9B 3.9V | | (VU17160) | | 01 |
| D422 | -- | ZENER DIODE | UDZS6.8BTE-17 6.8V | | (VU17220) | | 01 |
| D423 | -- | DIODE (CHIP) | HSU83 TRF -E | | (WD84430) | | |
| D424 | -- | DIODE (CHIP) | HSU83 TRF -E | | (WD84430) | | |
| D425 | -- | ZENER DIODE | UDZS6.8BTE-17 6.8V | | (VU17220) | | 01 |
| D426 | -- | ZENER DIODE | UDZS3.9B 3.9V | | (VU17160) | | 01 |
| D427 | -- | DIODE | D1FK60-5063 | | (WJ45930) | | 01 |
| -430 | -- | DIODE | D1FK60-5063 | | (WJ45930) | | 01 |
| D431 | -- | DIODE (CHIP) | HSU83 TRF -E | | (WD84430) | | |
| -438 | -- | DIODE (CHIP) | HSU83 TRF -E | | (WD84430) | | |
| D439 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| -442 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| D443 | -- | DIODE (CHIP) | D1F60 1A 600V | | (VS20110) | | 01 |
| -448 | -- | DIODE (CHIP) | D1F60 1A 600V | | (VS20110) | | 01 |
| D449 | -- | ZENER DIODE | UDZS15B 15V | | (VU17300) | | 01 |
| D450 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| -453 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| D454 | -- | ZENER DIODE | UDZS15B 15V | | (VU17300) | | 01 |
| D455 | -- | ZENER DIODE | UDZS15B 15V | | (VU17300) | | 01 |
| D456 | -- | ZENER DIODE | UDZS5.6B 5.6V | | (VU17200) | | 01 |
| D457 | -- | DIODE | AG01A WS | | (V862980) | | 01 |
| L401 | -- | COIL | 100uH THP-065HZ | | (V466830) | | 08 |
| L402 | -- | COIL | 100uH THP-065HZ | | (V466830) | | 08 |
| L403 | -- | COIL | 1.7uH 10x21 | | (WD40880) | | |
| L404 | -- | COIL | 1.7uH 10x21 | | (WD40880) | | |
| Q401 | -- | TRANSISTOR | 2SA1037AK Q,R,S | | (VV55650) | | 01 |
| Q402 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| Q403 | -- | TRANSISTOR | 2SA1037AK Q,R,S | | (VV55650) | | 01 |
| Q404 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| -406 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| Q407 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q408 | -- | TRANSISTOR (CHIP) | 2SC3324 GR,BL | | (V742170) | | 01 |
| Q409 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q410 | -- | TRANSISTOR (CHIP) | 2SC3324 GR,BL | | (V742170) | | 01 |
| Q413 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q414 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q415 | -- | TRANSISTOR | 2SC3468 D,E | | (VU41860) | | 01 |
| Q416 | -- | TRANSISTOR | 2SC3468 D,E | | (VU41860) | | 01 |
| Q417 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q418 | -- | TRANSISTOR (CHIP) | 2SC3324 GR,BL | | (V742170) | | 01 |
| Q419 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q420 | -- | TRANSISTOR (CHIP) | 2SC3324 GR,BL | | (V742170) | | 01 |
| Q421 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q422 | -- | TRANSISTOR | 2SC3468 D,E | | (VU41860) | | 01 |
| Q423 | -- | TRANSISTOR (CHIP) | 2SC3324 GR,BL | | (V742170) | | 01 |
| Q424 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q425 | -- | TRANSISTOR | 2SC3468 D,E | | (VU41860) | | 01 |
| Q426 | -- | TRANSISTOR (CHIP) | 2SC3324 GR,BL | | (V742170) | | 01 |

✻ : New Parts

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| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| Q427 | -- | TRANSISTOR | 2SC5866TL Q,R TA | | (WJ46640) | | 01 |
| Q428 | -- | TRANSISTOR | 2SA2094TL Q TA | | (WJ46630) | | 01 |
| Q429 | -- | TRANSISTOR | 2SC5866TL Q,R TA | | (WJ46640) | | 01 |
| Q430 | -- | TRANSISTOR | 2SA2094TL Q TA | | (WJ46630) | | 01 |
| Q431 | -- | TRANSISTOR | 2SC3468 D,E | | (VU41860) | | 01 |
| Q432 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q433 | -- | TRANSISTOR | 2SC3468 D,E | | (VU41860) | | 01 |
| Q434 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q435 | -- | TRANSISTOR | 2SC3468 D,E | | (VU41860) | | 01 |
| Q436 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q437 | -- | TRANSISTOR | 2SA2094TL Q TA | | (WJ46630) | | 01 |
| Q438 | -- | TRANSISTOR | 2SA1371 D,E | | (VU41840) | | 01 |
| Q439 | -- | TRANSISTOR | 2SC3468 D,E | | (VU41860) | | 01 |
| Q440 | -- | TRANSISTOR | 2SC5866TL Q,R TA | | (WJ46640) | | 01 |
| Q441 | -- | TRANSISTOR | 2SC5866TL Q,R TA | | (WJ46640) | | 01 |
| Q442 | -- | TRANSISTOR | 2SA2094TL Q TA | | (WJ46630) | | 01 |
| Q443 | -- | TRANSISTOR | 2SA2094TL Q TA | | (WJ46630) | | 01 |
| Q444 | -- | TRANSISTOR | 2SC5866TL Q,R TA | | (WJ46640) | | 01 |
| Q445 | -- | TRANSISTOR | 2SA2094TL Q TA | | (WJ46630) | | 01 |
| Q446 | -- | TRANSISTOR | 2SC5866TL Q,R TA | | (WJ46640) | | 01 |
| Q447 | -- | TRANSISTOR | 2SA2094TL Q TA | | (WJ46630) | | 01 |
| R401 | -- | CARBON RESISTOR (CHIP) | 150 1/16W J | | (RD35515) | | 01 |
| R402 | -- | CARBON RESISTOR (CHIP) | 150 1/16W J | | (RD35515) | | 01 |
| R403 | -- | CARBON RESISTOR (CHIP) | 12K 1/16W J | | (RD35712) | | 01 |
| R404 | -- | CARBON RESISTOR (CHIP) | 12K 1/16W J | | (RD35712) | | 01 |
| R405 | -- | THICK FILM RESISTOR (CHIP) | 330 1/10W D | | (RD55533) | | 01 |
| R406 | -- | CARBON RESISTOR (CHIP) | 12K 1/16W J | | (RD35712) | | 01 |
| R407 | -- | CARBON RESISTOR (CHIP) | 12K 1/16W J | | (RD35712) | | 01 |
| R408 | -- | THICK FILM RESISTOR (CHIP) | 330 1/10W D | | (RD55533) | | 01 |
| R409 | -- | CARBON RESISTOR (CHIP) | 220K 1/4W J | | (RD15822) | | 01 |
| R410 | -- | CARBON RESISTOR (CHIP) | 220K 1/4W J | | (RD15822) | | 01 |
| R411 | -- | CARBON RESISTOR (CHIP) | 220 1/16W J | | (RD35522) | | 01 |
| R412 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W J | | (RD35612) | | 01 |
| R413 | -- | CARBON RESISTOR (CHIP) | 220 1/16W J | | (RD35522) | | 01 |
| R414 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W J | | (RD35612) | | 01 |
| -416 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W J | | (RD35612) | | 01 |
| R417 | -- | CARBON RESISTOR (CHIP) | 220K 1/16W J | | (RD35822) | | 01 |
| R418 | -- | CARBON RESISTOR (CHIP) | 220K 1/16W J | | (RD35822) | | 01 |
| R419 | -- | CARBON RESISTOR (CHIP) | 220 1/16W J | | (RD35522) | | 01 |
| R420 | -- | CARBON RESISTOR (CHIP) | 390 1/16W J | | (RD35539) | | 01 |
| R421 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W J | | (RD35612) | | 01 |
| R422 | -- | CARBON RESISTOR (CHIP) | 220 1/16W J | | (RD35522) | | 01 |
| R423 | -- | CARBON RESISTOR (CHIP) | 390 1/16W J | | (RD35539) | | 01 |
| R424 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W J | | (RD35612) | | 01 |
| R425 | -- | CARBON RESISTOR | 12K 1/3W F | | (WE45760) | | 01 |
| -428 | -- | CARBON RESISTOR | 12K 1/3W F | | (WE45760) | | 01 |
| R429 | -- | CARBON RESISTOR (CHIP) | 220 1/16W J | | (RD35522) | | 01 |
| R430 | -- | CARBON RESISTOR (CHIP) | 220 1/16W J | | (RD35522) | | 01 |
| R431 | -- | CARBON RESISTOR (CHIP) | 47K 1/4W J | | (RD15747) | | 01 |
| -438 | -- | CARBON RESISTOR (CHIP) | 47K 1/4W J | | (RD15747) | | 01 |
| R439 | -- | CARBON RESISTOR (CHIP) | 470 1/16W D | | (RF45547) | | |
| R440 | -- | CARBON RESISTOR (CHIP) | 470 1/16W D | | (RF45547) | | |
| R441 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| -444 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R445 | -- | CARBON RESISTOR (CHIP) | 390 1/16W D | | (RF45539) | | 01 |
| R446 | -- | CARBON RESISTOR (CHIP) | 15 1/16W D | | (RF45415) | | 01 |
| R447 | -- | CARBON RESISTOR (CHIP) | 1.8K 1/16W J | | (RD35618) | | 01 |
| R448 | -- | CARBON RESISTOR (CHIP) | 390 1/16W D | | (RF45539) | | 01 |
| R449 | -- | CARBON RESISTOR (CHIP) | 15 1/16W D | | (RF45415) | | 01 |
| R450 | -- | CARBON RESISTOR (CHIP) | 1.8K 1/16W J | | (RD35618) | | 01 |
| R451 | -- | CARBON RESISTOR (CHIP) | 150 1/4W J | | (RD15515) | | |
| -454 | -- | CARBON RESISTOR (CHIP) | 150 1/4W J | | (RD15515) | | |
| R455 | -- | CARBON RESISTOR (CHIP) | 470 1/4W J | | (RD15547) | | |
| -458 | -- | CARBON RESISTOR (CHIP) | 470 1/4W J | | (RD15547) | | |
| R459 | -- | CARBON RESISTOR (CHIP) | 22K 1/4W J | | (RD15722) | | 01 |
| -471 | -- | CARBON RESISTOR (CHIP) | 22K 1/4W J | | (RD15722) | | 01 |
| R472 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | | (RD35347) | | 01 |
| R473 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | | (RD35347) | | 01 |
| R474 | -- | CARBON RESISTOR (CHIP) | 22K 1/4W J | | (RD15722) | | 01 |
| R475 | -- | CARBON RESISTOR (CHIP) | 22K 1/4W J | | (RD15722) | | 01 |

✻ : New Parts

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| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| R476 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | | (RD35347) | | 01 |
| R477 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | | (RD35347) | | 01 |
| R478 | -- | CARBON RESISTOR (CHIP) | 22K 1/4W J | | (RD15722) | | 01 |
| R479 | -- | CARBON RESISTOR (CHIP) | 3.3K 1/16W J | | (RD35633) | | 01 |
| -482 | -- | CARBON RESISTOR (CHIP) | 3.3K 1/16W J | | (RD35633) | | 01 |
| R483 | -- | CARBON RESISTOR (CHIP) | 91K 1/16W J | | (RD35791) | | 01 |
| -486 | -- | CARBON RESISTOR (CHIP) | 91K 1/16W J | | (RD35791) | | 01 |
| R487 | -- | CARBON RESISTOR (CHIP) | 1.8K 1/16W J | | (RD35618) | | 01 |
| -490 | -- | CARBON RESISTOR (CHIP) | 1.8K 1/16W J | | (RD35618) | | 01 |
| R491 | -- | CARBON RESISTOR (CHIP) | 330 1/4W J | | (RD15533) | | 01 |
| -494 | -- | CARBON RESISTOR (CHIP) | 330 1/4W J | | (RD15533) | | 01 |
| R495 | -- | CARBON RESISTOR (CHIP) | 220 1/16W J | | (RD35522) | | 01 |
| -498 | -- | CARBON RESISTOR (CHIP) | 220 1/16W J | | (RD35522) | | 01 |
| R499 | -- | CARBON RESISTOR (CHIP) | 22 1/4W J | | (RD15422) | | 01 |
| -502 | -- | CARBON RESISTOR (CHIP) | 22 1/4W J | | (RD15422) | | 01 |
| R503 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R504 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R505 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R506 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R507 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R508 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R509 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R510 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R511 | V4833201 | WIRE WOUND RESISTOR | 0.22 5W K | | | | 01 |
| -514 | V4833201 | WIRE WOUND RESISTOR | 0.22 5W K | | | | 01 |
| R515 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R516 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R517 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R518 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R519 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R520 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R521 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R522 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R523 | V4833201 | WIRE WOUND RESISTOR | 0.22 5W K | | | | 01 |
| -526 | V4833201 | WIRE WOUND RESISTOR | 0.22 5W K | | | | 01 |
| R527 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R528 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R529 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R530 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R531 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R532 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R533 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R534 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R535 | V4833201 | WIRE WOUND RESISTOR | 0.22 5W K | | | | 01 |
| -538 | V4833201 | WIRE WOUND RESISTOR | 0.22 5W K | | | | 01 |
| R539 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R540 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R541 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R542 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R543 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R544 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R545 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R546 | -- | CARBON RESISTOR (CHIP) | 2.2 1/16W J | | (RD35322) | | 01 |
| R547 | V4833201 | WIRE WOUND RESISTOR | 0.22 5W K | | | | 01 |
| -550 | V4833201 | WIRE WOUND RESISTOR | 0.22 5W K | | | | 01 |
| R551 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W J | | (RD35612) | | 01 |
| R552 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W J | | (RD35612) | | 01 |
| R553 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R554 | -- | CARBON RESISTOR (CHIP) | 2.2K 1/16W J | | (RD35622) | | 01 |
| R555 | -- | CARBON RESISTOR (CHIP) | 2.2K 1/16W J | | (RD35622) | | 01 |
| R556 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R557 | -- | CARBON RESISTOR (CHIP) | 150 1/16W J | | (RD35515) | | 01 |
| R558 | -- | CARBON RESISTOR (CHIP) | 150 1/16W J | | (RD35515) | | 01 |
| R559 | -- | CARBON RESISTOR (CHIP) | 1.0 1/4W J | | (RD15310) | | 01 |
| R560 | -- | CARBON RESISTOR (CHIP) | 1.0 1/4W J | | (RD15310) | | 01 |
| R561 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | | 01 |
| R562 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | | 01 |
| R563 | -- | CARBON RESISTOR (CHIP) | 1.0 1/4W J | | (RD15310) | | 01 |
| R564 | -- | CARBON RESISTOR (CHIP) | 1.0 1/4W J | | (RD15310) | | 01 |
| R565 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | | 01 |

✻ : New Parts

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| | REF NO. | PART NO. | DESCRIPTION | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| | R566 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | 01 |
| | R567 | -- | CARBON RESISTOR (CHIP) | 1.0 1/4W J | (RD15310) | | 01 |
| | R568 | -- | CARBON RESISTOR (CHIP) | 1.0 1/4W J | (RD15310) | | 01 |
| | R569 | -- | FLAME PROOF C. RESISTOR | 1.0 1/4W J | (HV75310) | | 01 |
| | R570 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | 01 |
| | R571 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | 01 |
| | R572 | -- | FLAME PROOF C. RESISTOR | 1.0 1/4W J | (HV75310) | | 01 |
| | R573 | -- | CARBON RESISTOR (CHIP) | 1.0 1/4W J | (RD15310) | | 01 |
| | R574 | -- | CARBON RESISTOR (CHIP) | 1.0 1/4W J | (RD15310) | | 01 |
| | R575 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | 01 |
| | R576 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | 01 |
| | R577 | -- | CARBON RESISTOR (CHIP) | 47K 1/4W J | (RD15747) | | 01 |
| | R578 | -- | CARBON RESISTOR (CHIP) | 47K 1/4W J | (RD15747) | | 01 |
| | R579 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | (RD35347) | | 01 |
| | R580 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | (RD35533) | | 01 |
| | R581 | -- | CARBON RESISTOR (CHIP) | 10K 1/4W J | (RD15710) | | 01 |
| | R582 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | (RD35610) | | 01 |
| | R583 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | (RD35347) | | 01 |
| | R584 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | (RD35347) | | 01 |
| | R585 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | (RD35610) | | 01 |
| | R586 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | (RD35533) | | 01 |
| | R587 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | (RD35610) | | 01 |
| | R588 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | (RD35533) | | 01 |
| | R589 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | (RD35610) | | 01 |
| | R590 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | (RD35533) | | 01 |
| | R591 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | (RD35533) | | 01 |
| | R592 | -- | CARBON RESISTOR (CHIP) | 470 1/4W J | (RD15547) | | |
| | R593 | -- | CARBON RESISTOR (CHIP) | 470 1/4W J | (RD15547) | | |
| | R594 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | (RD35510) | | 01 |
| | R595 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | (RD35347) | | 01 |
| | R596 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | (RD35510) | | 01 |
| | R597 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/4W J | (RD15647) | | |
| | R598 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | (RD35422) | | 01 |
| | -603 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | (RD35422) | | 01 |
| | R604 | -- | FLAME PROOF C. RESISTOR | 680 1/4W J | (HV75568) | | 01 |
| | R605 | -- | FLAME PROOF C. RESISTOR | 680 1/4W J | (HV75568) | | 01 |
| | R606 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | (RD35347) | | 01 |
| | R607 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | (RD35747) | | 01 |
| | R608 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | (RD35747) | | 01 |
| | R609 | -- | THICK FILM RESISTOR (CHIP) | 330 1/10W D | (RD55533) | | 01 |
| | R610 | -- | THICK FILM RESISTOR (CHIP) | 330 1/10W D | (RD55533) | | 01 |
| | R611 | -- | CARBON RESISTOR (CHIP) | 2.2M 1/16W J | (RD35922) | | 01 |
| | R612 | -- | CARBON RESISTOR (CHIP) | 330K 1/16W J | (RD35833) | | 01 |
| | RY401 | -- | RELAY | DC G6J-2P-Y | (WJ53740) | | 06 |
| | RY402 | -- | RELAY | DC G6J-2P-Y | (WJ53740) | | 06 |
| | VR401 | -- | TRIMMER POTENTIOMETER | B220 FUSE 3P EVN | (WK58070) | | 01 |
| | VR402 | -- | TRIMMER POTENTIOMETER | B220 FUSE 3P EVN | (WK58070) | | 01 |
| | VR403 | -- | TRIMMER POTENTIOMETER | B470 FUSE 3P EVN | (VL40330) | | 01 |
| | VR404 | -- | TRIMMER POTENTIOMETER | B470 FUSE 3P EVN | (VL40330) | | 01 |
| | W401 | -- | CONNECTOR ASSEMBLY PAPS | B&C TUBE 7P 280mm | (WK14210) | | 03 |
| | W402 | -- | CONNECTOR ASSEMBLY | B&C 1P 200mm RE | (WM04870) | | 01 |
| | W403 | -- | CONNECTOR ASSEMBLY | B&C 1P 200mm BK | (WK16800) | | 01 |
| | W404 | -- | CONNECTOR ASSEMBLY | B&C 1P 200mm WH | (WK16810) | | 01 |
| | W405 | -- | CONNECTOR ASSEMBLY | B&C 1P 250mm OR | (WN52530) | | |
| | W406 | -- | CONNECTOR ASSEMBLY | B&C 1P 300mm YE | (WK16830) | | |
| | | | | | | | |
| * | | WJ974101 | CIRCUIT BOARD | PSANL | J,U (X8715F0) | | 72 |
| * | | WJ974201 | CIRCUIT BOARD | PSANL | CHN (X8715F0) | | 72 |
| | | -- | FUSE HOLDER | WL-211 | J,U (WA77220) | 4 | |
| | | -- | FUSE CLIP | CLIP EYF52BCY | J,U (WC05070) | 2 | 01 |
| | | -- | FUSE HOLDER | PIN TP00526-31 | J,U (WQ77880) | 2 | 01 |
| | | -- | FUSE CLIP | CLIP EYF52BCY | CHN (WC05070) | 6 | 01 |
| | | -- | FUSE HOLDER | PIN TP00526-31 | CHN (WQ77880) | 6 | 01 |
| | | -- | R-WIRING ASSY | R FOR NX AMPLIFIER | J,U (WR78430) | 2 | |
| ⚠ | C101 | -- | CAPACITOR | 1.0uF 275V | (V936510) | | 03 |
| ⚠ | C102 | -- | CAPACITOR | 1.0uF 275V | (V936510) | | 03 |
| ⚠ | C103 | -- | ELECTROLYTIC CAP. | 2200pF 250V | (WK46370) | | 01 |
| ⚠ | C104 | -- | ELECTROLYTIC CAP. | 2200pF 250V | (WK46370) | | 01 |
| ⚠ | C105 | -- | CAPACITOR | 1.0uF 275V | (V936510) | | 03 |
| ⚠ | C106 | -- | ELECTROLYTIC CAP. | 1000pF 250V | (WK46360) | | 01 |

✻ : New Parts

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## PSANL

| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| ⚠ | C107 | -- | ELECTROLYTIC CAP. | 1000pF 250V | | (WK46360) | | 01 |
| | C201 | -- | POLYESTER CAP. | 0.047uF 400V K | | (WB68710) | | 01 |
| | C202 | -- | ELECTROLYTIC CAP. | 47uF 35V | | (UR85747) | | 01 |
| | C203 | -- | ELECTROLYTIC CAP. | 22uF 25V | | (WF20440) | | 01 |
| | C204 | -- | ELECTROLYTIC CAP. | 22uF 25V | | (WF20440) | | 01 |
| | C205 | -- | ELECTROLYTIC CAP. | 100uF 400V | | (WK76570) | | |
| | C206 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | -208 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C209 | -- | CERAMIC CAPACITOR-B | 2200pF 1KV K | | (WJ59710) | | 01 |
| | C210 | -- | ELECTROLYTIC CAP. | 47uF 35V | | (UR85747) | | 01 |
| | C211 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C212 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C213 | -- | ELECTROLYTIC CAP. | 22uF 25V | | (WF20440) | | 01 |
| | C214 | -- | ELECTROLYTIC CAP. | 22uF 25V | | (WF20440) | | 01 |
| | C215 | -- | ELECTROLYTIC CAP. | 220uF 25V | | (WF20450) | | 01 |
| | C216 | -- | ELECTROLYTIC CAP. | 10uF 100V | | (VN70430) | | 01 |
| | C217 | -- | ELECTROLYTIC CAP. | 330uF 35V | | (WJ86030) | | 01 |
| | C218 | -- | ELECTROLYTIC CAP. | 330uF 35V | | (WJ86030) | | 01 |
| | C219 | -- | ELECTROLYTIC CAP. | 4700uF 6.3V | | (WJ59720) | | 03 |
| | C220 | -- | ELECTROLYTIC CAP. | 47uF 35V | | (UR85747) | | 01 |
| | C221 | -- | ELECTROLYTIC CAP. | 47uF 35V | | (UR85747) | | 01 |
| | C222 | -- | ELECTROLYTIC CAP. | 4700uF 6.3V | | (WJ59720) | | 03 |
| | C223 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C224 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C225 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C226 | -- | CERAMIC CAPACITOR-B (CHIP) | 1000pF 50V K | | (US06310) | | 01 |
| | C229 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | -231 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C232 | -- | ELECTROLYTIC CAP. | 47uF 35V | | (UR85747) | | 01 |
| | C233 | -- | ELECTROLYTIC CAP. | 47uF 35V | | (UR85747) | | 01 |
| | C234 | -- | ELECTROLYTIC CAP. | 100uF 16V | | (UR83810) | | 01 |
| | C235 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C236 | -- | ELECTROLYTIC CAP. | 47uF 35V | | (UR85747) | | 01 |
| | C237 | -- | ELECTROLYTIC CAP. | 47uF 35V | | (UR85747) | | 01 |
| | C238 | -- | CERAMIC CAPACITOR-F (CHIP) | 1.0uF 10V Z | | (US12610) | | 01 |
| | C239 | -- | ELECTROLYTIC CAP. | 470uF 6.3V | | (WB80680) | | 01 |
| | C240 | -- | ELECTROLYTIC CAP. | 220uF 6.3V | | (UR81822) | | 01 |
| | C241 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C242 | -- | ELECTROLYTIC CAP. | 220uF 6.3V | | (VN69150) | | |
| | C243 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C244 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C246 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C247 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C248 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C249 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | -254 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C255 | -- | MONOLITHIC CERAMIC CAP. | 1000pF 250V K | | (WJ83500) | | 01 |
| | C257 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C258 | -- | MONOLITHIC CERAMIC CAP. | 68pF 1000V J | | (WK91490) | | 01 |
| | C301 | -- | CERAMIC CAPACITOR-SL(CHIP) | 100pF 50V J | | (US06210) | | 01 |
| | C302 | -- | CERAMIC CAPACITOR-SL(CHIP) | 100pF 50V J | | (US06210) | | 01 |
| | C303 | -- | MONOLITHIC MYLAR CAPACITOR | 0.1uF 50V | | (VR16830) | | 01 |
| | C304 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C305 | -- | CERAMIC CAPACITOR-SL(CHIP) | 470pF 50V J | | (US06247) | | 01 |
| | C306 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C307 | -- | MONOLITHIC MYLAR CAPACITOR | 0.1uF 50V | | (VR16830) | | 01 |
| | C308 | -- | MONOLITHIC MYLAR CAPACITOR | 0.1uF 50V | | (VR16830) | | 01 |
| | C310 | -- | CERAMIC CAPACITOR-SL(CHIP) | 470pF 50V J | | (US06247) | | 01 |
| | C311 | -- | CERAMIC CAPACITOR-SL(CHIP) | 470pF 50V J | | (US06247) | | 01 |
| | C312 | -- | CERAMIC CAPACITOR-CH(CHIP) | 22pF 50V J | | (US06122) | | 01 |
| | C313 | -- | CERAMIC CAPACITOR-CH(CHIP) | 22pF 50V J | | (US06122) | | 01 |
| | C314 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C315 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C316 | -- | ELECTROLYTIC CAP. | 2200uF 200V | | (WD53830) | | 07 |
| | -319 | -- | ELECTROLYTIC CAP. | 2200uF 200V | | (WD53830) | | 07 |
| | C320 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C321 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C322 | -- | ELECTROLYTIC CAP. | 2200uF 200V | | (WD53830) | | 07 |
| | -325 | -- | ELECTROLYTIC CAP. | 2200uF 200V | | (WD53830) | | 07 |
| | C326 | -- | POLYPROPYLENE CAPACITOR | 1.8uF 250V J | | (WH34340) | | 01 |

✻ : New Parts

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# PSANL

| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | -329 | -- | POLYPROPYLENE CAPACITOR | 1.8uF 250V J | | (WH34340) | | 01 |
| | C330 | -- | MONOLITHIC MYLAR CAPACITOR | 0.1uF 50V | | (VR16830) | | 01 |
| | C331 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C332 | -- | MONOLITHIC MYLAR CAPACITOR | 0.1uF 50V | | (VR16830) | | 01 |
| | C333 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C334 | -- | ELECTROLYTIC CAP. PW | 10uF 25V | | (WD53850) | | 01 |
| | C335 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C336 | -- | ELECTROLYTIC CAP. PW | 10uF 25V | | (WD53850) | | 01 |
| | C337 | -- | ELECTROLYTIC CAP. | 10uF 50V | | (UR86710) | | 01 |
| | C338 | -- | CERAMIC CAPACITOR-CH(CHIP) | 22pF 50V J | | (US06122) | | 01 |
| | C339 | -- | CERAMIC CAPACITOR-CH(CHIP) | 22pF 50V J | | (US06122) | | 01 |
| | C340 | -- | ELECTROLYTIC CAP. PW | 10uF 25V | | (WD53850) | | 01 |
| | -343 | -- | ELECTROLYTIC CAP. PW | 10uF 25V | | (WD53850) | | 01 |
| | C344 | -- | ELECTROLYTIC CAP. | 1200uF 160V | | (WJ99780) | | |
| | C345 | -- | ELECTROLYTIC CAP. | 1200uF 160V | | (WJ99780) | | |
| | C346 | -- | ELECTROLYTIC CAP. PW | 100uF 35V RX | | (V902330) | | 01 |
| | C347 | -- | ELECTROLYTIC CAP. | 1200uF 160V | | (WJ99780) | | |
| | C348 | -- | ELECTROLYTIC CAP. | 1200uF 160V | | (WJ99780) | | |
| | C349 | -- | ELECTROLYTIC CAP. PW | 100uF 35V RX | | (V902330) | | 01 |
| | C350 | -- | MONOLITHIC MYLAR CAPACITOR | 0.1uF 50V | | (VR16830) | | 01 |
| | C351 | -- | MONOLITHIC MYLAR CAPACITOR | 0.1uF 50V | | (VR16830) | | 01 |
| | C352 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C353 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C354 | -- | ELECTROLYTIC CAP. | 1200uF 160V | | (WJ99780) | | |
| | -357 | -- | ELECTROLYTIC CAP. | 1200uF 160V | | (WJ99780) | | |
| | C358 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C359 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C360 | -- | ELECTROLYTIC CAP. | 4.7uF 50V | | (UR86647) | | 01 |
| | C361 | -- | ELECTROLYTIC CAP. | 4.7uF 50V | | (UR86647) | | 01 |
| | C362 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C363 | -- | CERAMIC CAPACITOR-B (CHIP) | 0.01uF 50V K | | (US06410) | | 01 |
| | C364 | -- | CERAMIC CAPACITOR-B (CHIP) | 1000pF 50V K | | (US06310) | | 01 |
| | C365 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| | C366 | -- | CERAMIC CAPACITOR-B(CHIP) | 0.1uF 50V K | | (WD96920) | | 01 |
| ⚠ | CN101 | -- | SCREW TERMINAL | P-820N | | (WK66210) | | 03 |
| ⚠ | CN102 | -- | SCREW TERMINAL | P-820N | | (WK66210) | | 03 |
| ⚠ | CN103 | -- | CONNECTOR, BASE POST | VH 3P TE | | (LB93203) | | 01 |
| | CN201 | -- | CONNECTOR BASE POST | PH 9P TE | | (VB39050) | | 03 |
| | CN202 | -- | CONNECTOR, BASE POST | PH 5P TE | | (VB39010) | | 01 |
| | CN305 | -- | FASTEN TERMINAL | 16611BL-2 | | (WA76770) | | |
| | -310 | -- | FASTEN TERMINAL | 16611BL-2 | | (WA76770) | | |
| | CN311 | -- | CONNECTOR, BASE POST | PH 2P TE | | (VB38980) | | 01 |
| | CN312 | -- | CONNECTOR, BASE POST | PH 7P TE | | (VB39030) | | 01 |
| | CN313 | -- | CONNECTOR, BASE POST | PH 11P TE | | (VB39070) | | 01 |
| | CN314 | -- | CONNECTOR, BASE POST | PH 2P TE | | (VB38980) | | 01 |
| | CN315 | -- | CONNECTOR, BASE POST | PH 7P TE | | (VB39030) | | 01 |
| | CN316 | -- | FASTEN TERMINAL | 16611BL-2 | | (WA76770) | | |
| | CN317 | -- | FASTEN TERMINAL | 16611BL-2 | | (WA76770) | | |
| | D101 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| | D102 | -- | DIODE | 1SS355 TE-17 | | (VT33290) | | 01 |
| ⚠ | D201 | -- | DIODE | 1SR154-400 | | (VT53250) | | 01 |
| ⚠ | D202 | -- | DIODE | D2F60-5063 | | (WK83640) | | 01 |
| ⚠ | -205 | -- | DIODE | D2F60-5063 | | (WK83640) | | 01 |
| | D206 | -- | ZENER DIODE | 120V 1SMB5951BT3G | | (WK91200) | | 02 |
| | D207 | -- | ZENER DIODE | 150V 1SMB5953BT3G | | (WK91190) | | 02 |
| | D208 | -- | DIODE | AG01A WS | | (V862980) | | 01 |
| | D209 | -- | DIODE | 1SS244 TP | | (WA18030) | | 01 |
| | D210 | -- | DIODE (CHIP) | 1.1A 200V D1FL20U | | (VV46300) | | 01 |
| | D211 | -- | DIODE (CHIP) | 1.1A 200V D1FL20U | | (VV46300) | | 01 |
| | D212 | -- | DIODE | 1SS244 TP | | (WA18030) | | 01 |
| | D214 | -- | DIODE (CHIP) | SJPX-H3 VR | | (WK83420) | | 02 |
| | D215 | -- | DIODE (CHIP) | 1.1A 200V D1FL20U | | (VV46300) | | 01 |
| | D216 | -- | ZENER DIODE | UDZS3.6B 3.6V | | (VU17150) | | 01 |
| | D218 | -- | DIODE (CHIP) | RB160L-40 TE25 | | (VS59760) | | 01 |
| | D219 | -- | DIODE (CHIP) | RB160L-40 TE25 | | (VS59760) | | 01 |
| | D220 | -- | DIODE | DE3S6M | | (WE49220) | | 02 |
| | D221 | -- | DIODE (CHIP) | RB160L-40 TE25 | | (VS59760) | | 01 |
| | -224 | -- | DIODE (CHIP) | RB160L-40 TE25 | | (VS59760) | | 01 |
| | D226 | -- | DIODE (CHIP) | RB160L-40 TE25 | | (VS59760) | | 01 |
| | D227 | -- | DIODE | 1SS244 TP | | (WA18030) | | 01 |

✻ : New Parts

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## PSANL

| | REF NO. | PART NO. | DESCRIPTION | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| | D301 | -- | DIODE | 1SS244 TP | (WA18030) | | 01 |
| | D302 | -- | DIODE | 1SS244 TP | (WA18030) | | 01 |
| | D303 | -- | ZENER DIODE | UDZS12B TE-17 12V | (VU17280) | | 01 |
| | D304 | -- | ZENER DIODE | UDZS12B TE-17 12V | (VU17280) | | 01 |
| | D307 | -- | DIODE | AG01A WS | (V862980) | | 01 |
| | D308 | -- | DIODE | AG01A WS | (V862980) | | 01 |
| | D309 | -- | DIODE (CHIP) | 1.1A 200V D1FL20U | (VV46300) | | 01 |
| | -312 | -- | DIODE (CHIP) | 1.1A 200V D1FL20U | (VV46300) | | 01 |
| | D313 | -- | DIODE | RL3A LFNO.014-302 | (V862970) | | 02 |
| | -316 | -- | DIODE | RL3A LFNO.014-302 | (V862970) | | 02 |
| | D317 | -- | DIODE (CHIP) | 1.1A 200V D1FL20U | (VV46300) | | 01 |
| | D318 | -- | DIODE (CHIP) | 1.1A 200V D1FL20U | (VV46300) | | 01 |
| | D323 | -- | DIODE (CHIP) | 1.1A 200V D1FL20U | (VV46300) | | 01 |
| | -328 | -- | DIODE (CHIP) | 1.1A 200V D1FL20U | (VV46300) | | 01 |
| | D329 | -- | ZENER DIODE | UDZS16B 16V | (VU17310) | | 01 |
| | D330 | -- | ZENER DIODE | UDZS12B TE-17 12V | (VU17280) | | 01 |
| | D331 | -- | ZENER DIODE | UDZS16B 16V | (VU17310) | | 01 |
| | D332 | -- | ZENER DIODE | UDZS12B TE-17 12V | (VU17280) | | 01 |
| | D333 | -- | SHOTKY DIODE | RB551V-30 | (V963430) | | 01 |
| | D334 | -- | SHOTKY DIODE | RB551V-30 | (V963430) | | 01 |
| ⚠ | F101 | VT94300R | FUSE | TH 3.15A S 250V Time lag | | | 01 |
| ⚠ | F301 | V8932000 | FUSE | 25A 250V JU | J,U | | 03 |
| ⚠ | F301 | V541370R | FUSE | TH 10.0A 250V | CHN | | 01 |
| ⚠ | F302 | V8932000 | FUSE | 25A 250V JU | J,U | | 03 |
| ⚠ | F302 | V541370R | FUSE | TH 10.0A 250V | CHN | | 01 |
| ⚠ | F303 | WE90920R | FUSE | 5.0A Fast-Acting | | | 02 |
| ⚠ | F304 | WE90920R | FUSE | 5.0A Fast-Acting | | | 02 |
| | H101 | -- | HEAT SINK UNIT | AN-PA-HIGH 100mm | (WK66920) | | |
| | H102 | -- | HEAT SINK UNIT | AN-PA-HIGH 60mm | (WK66930) | | |
| | H103 | -- | HEAT SINK UNIT | AN-PA-HIGH 50mm | (WK66950) | | |
| | H104 | -- | HEAT SINK UNIT | AN-PA-HIGH 100mm | (WK66910) | | |
| | H105 | -- | HEAT SINK UNIT | AN-PA-HIGH 60mm | (WK66940) | | |
| | H106 | -- | HEAT SINK UNIT | NX,TX6 25mm | (WM44760) | | |
| | IC202 | -- | IC | NJM7815FA | REGULATOR +15V (XD853A0) | | 03 |
| | IC203 | -- | IC | NJM7815FA | REGULATOR +15V (XD853A0) | | 03 |
| | IC204 | -- | IC | NJM431U(TE1) | VARIABLE SHUNT REGULATOR (X6770A0) | | 01 |
| | IC205 | -- | IC | NJU7630M(TE1) PWM | SWITCHING REGULATOR (X8682A0) | | 04 |
| | IC208 | -- | IC | PQ1CX12H2ZPQ | REGULATOR (X6188A0) | | 06 |
| | IC301 | -- | IC | SG2525AN PWM IC | PULSE WIDTH MODULATO (X8960A0) | | 03 |
| | IC302 | X2382A04 | IC | IR2110PBF | IR2110PBF | | 06 |
| | IC303 | X2382A04 | IC | IR2110PBF | IR2110PBF | | 06 |
| | J301 | -- | WIRE HARNESS | 0.55 TIN | J,U (VA07891) | | |
| | -304 | -- | WIRE HARNESS | 0.55 TIN | J,U (VA07891) | | |
| | J305 | -- | WIRE HARNESS | 0.55 TIN | CHN (VA07891) | | |
| | J306 | -- | WIRE HARNESS | 0.55 TIN | CHN (VA07891) | | |
| | J307 | -- | WIRE HARNESS | 0.55 TIN | J,U (VA07891) | | |
| | -310 | -- | WIRE HARNESS | 0.55 TIN | J,U (VA07891) | | |
| | J311 | -- | WIRE HARNESS | 0.55 TIN | CHN (VA07891) | | |
| | J312 | -- | WIRE HARNESS | 0.55 TIN | CHN (VA07891) | | |
| | K101 | -- | PLATE, GND | MLA8 | (WC53340) | | |
| ⚠ | L101 | -- | COIL | LDFM025252MJ-H0E Y | (WH26940) | | 13 |
| ⚠ | L102 | -- | COIL | LDFM025252MJ-H0E Y | (WH26940) | | 13 |
| | L201 | -- | CHIP INDUCTANCE | 6.8uH | (WK03780) | | 01 |
| | -204 | -- | CHIP INDUCTANCE | 6.8uH | (WK03780) | | 01 |
| | L205 | -- | COIL | 10uH LH L 08TB100 | (VR92920) | | 01 |
| | L206 | -- | POWER INDUCTOR | 10uH 7313NA100M RX | (WD95290) | | 02 |
| | L207 | -- | COIL | 220uH | (WK11970) | | 03 |
| | L208 | -- | CHIP INDUCTANCE | 6.8uH | (WK03780) | | 01 |
| | -210 | -- | CHIP INDUCTANCE | 6.8uH | (WK03780) | | 01 |
| | L301 | -- | CHIP INDUCTANCE | 6.8uH | (WK03780) | | 01 |
| | L302 | -- | CHIP INDUCTANCE | 6.8uH | (WK03780) | | 01 |
| ⚠ | PH201 | -- | PHOTO COUPLER | TLP781(D4-GR,F) | (WP38820) | | 01 |
| ⚠ | PH202 | -- | PHOTO COUPLER | TLP781(D4-GR,F) | (WP38820) | | 01 |
| ⚠ | PH301 | -- | PHOTO COUPLER | TLP781(D4-GR,F) | (WP38820) | | 01 |
| ⚠ | -303 | -- | PHOTO COUPLER | TLP781(D4-GR,F) | (WP38820) | | 01 |
| | Q201 | -- | TRANSISTOR | 2SC2412K Q,R,S | (VV55640) | | 01 |
| | Q202 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | (WC43500) | | 01 |

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# PSANL

| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | Q203 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | Q204 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | Q206 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | Q207 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | Q214 | -- | FET | TPC8109(TE12L,Q) | | (WD54130) | | 03 |
| | Q217 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | Q218 | -- | TRANSISTOR | 2SA1037AK Q,R,S | | (VV55650) | | 01 |
| | Q219 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | Q301 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | Q302 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | Q303 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | Q304 | -- | TRANSISTOR | 2SA1037AK Q,R,S | | (VV55650) | | 01 |
| | Q305 | -- | TRANSISTOR | 2SA1037AK Q,R,S | | (VV55650) | | 01 |
| | Q306 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | Q307 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | Q308 | -- | TRANSISTOR | 2SA1037AK Q,R,S | | (VV55650) | | 01 |
| | Q309 | -- | TRANSISTOR | 2SA1037AK Q,R,S | | (VV55650) | | 01 |
| | Q310 | -- | DIGITAL TRANSISTOR | KRA102S-RTK/P | | (WC43480) | | 01 |
| | Q311 | -- | DIGITAL TRANSISTOR | KRA102S-RTK/P | | (WC43480) | | 01 |
| | Q312 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | Q313 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | Q318 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | Q319 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | Q320 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | -323 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | Q326 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | -329 | -- | DIGITAL TRANSISTOR | KRC102S-RTK/P | | (WC43500) | | 01 |
| | Q330 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | -332 | -- | TRANSISTOR | 2SC2412K Q,R,S | | (VV55640) | | 01 |
| | R101 | -- | CARBON RESISTOR | 220K 1/4W J | | (HF05822) | | |
| | R102 | -- | CARBON RESISTOR | 220K 1/4W J | | (HF05822) | | |
| ⚠ | R103 | VN067401 | WIRE WOUND RESISTOR | 6.8 5W K | | | | 03 |
| ⚠ | -105 | VN067401 | WIRE WOUND RESISTOR | 6.8 5W K | | | | 03 |
| ⚠ | R106 | -- | CARBON RESISTOR | 220K 1/4W J | | CHN (HF05822) | | |
| ⚠ | R107 | -- | CARBON RESISTOR | 220K 1/4W J | | CHN (HF05822) | | |
| ⚠ | R108 | VN067401 | WIRE WOUND RESISTOR | 6.8 5W K | | | | 03 |
| | R111 | -- | CARBON RESISTOR (CHIP) | 470 1/16W J | | (RD35547) | | 01 |
| | -113 | -- | CARBON RESISTOR (CHIP) | 470 1/16W J | | (RD35547) | | 01 |
| | R114 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W J | | (RD35647) | | 01 |
| | R115 | -- | CARBON RESISTOR (CHIP) | 2.2K 1/16W J | | (RD35622) | | 01 |
| | R116 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| | -119 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| | R122 | -- | CARBON RESISTOR (CHIP) | 10 1/16W J | | (RD35410) | | 01 |
| | R123 | -- | CARBON RESISTOR (CHIP) | 10 1/16W J | | (RD35410) | | 01 |
| | R124 | -- | CARBON RESISTOR (CHIP) | 560K 1/10W D | | (V646540) | | |
| | R125 | -- | CARBON RESISTOR (CHIP) | 560K 1/10W D | | (V646540) | | |
| | R201 | -- | METAL OXIDE FILM RESISTOR | 100K 2W J | | (WK03770) | | 01 |
| | R202 | -- | METAL OXIDE FILM RESISTOR | 100K 2W J | | (WK03770) | | 01 |
| | R203 | -- | CARBON RESISTOR (CHIP) | 3.9K 1/16W J | | (RD35639) | | 01 |
| | R204 | -- | CARBON RESISTOR (CHIP) | 3.9K 1/16W J | | (RD35639) | | 01 |
| | R205 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | R206 | -- | CARBON RESISTOR (CHIP) | 15K 1/16W J | | (RD35715) | | 01 |
| | R207 | -- | CARBON RESISTOR (CHIP) | 120K 1/16W J | | (RD35812) | | 01 |
| | R208 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | R209 | -- | METAL FILM RESISTOR | 1.0M 1/4W J | | (WQ38860) | | 01 |
| | R210 | -- | METAL FILM RESISTOR | 1.0M 1/4W J | | (WQ38860) | | 01 |
| | R211 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | R212 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | R213 | -- | METAL OXIDE FILM RESISTOR | 33K 2W J | | (VT87980) | | 01 |
| | -216 | -- | METAL OXIDE FILM RESISTOR | 33K 2W J | | (VT87980) | | 01 |
| | R217 | -- | CARBON RESISTOR (CHIP) | 1.0 1/16W J | | (RD35310) | | 01 |
| | -224 | -- | CARBON RESISTOR (CHIP) | 1.0 1/16W J | | (RD35310) | | 01 |
| | R225 | -- | CARBON RESISTOR (CHIP) | 150 1/16W J | | (RD35515) | | 01 |
| | R226 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RD35747) | | 01 |
| | R227 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |
| | R228 | -- | CARBON RESISTOR (CHIP) | 220K 1/16W J | | (RD35822) | | 01 |
| | R229 | -- | CARBON RESISTOR (CHIP) | 220K 1/16W J | | (RD35822) | | 01 |
| | R230 | -- | CARBON RESISTOR (CHIP) | 1.5K 1/16W J | | (RD35615) | | 01 |
| | R231 | -- | CARBON RESISTOR (CHIP) | 220K 1/16W D | | (RF45822) | | 01 |
| | R232 | -- | CARBON RESISTOR (CHIP) | 8.2K 1/16W D | | (RF45682) | | |

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| REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|
| R237 | -- | CARBON RESISTOR (CHIP) | 3.3K 1/16W J | | (RD35633) | | 01 |
| R240 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W D | | (RF45710) | | |
| R241 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W D | | (RF45710) | | |
| R244 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R245 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | | (RD35347) | | 01 |
| R246 | -- | CARBON RESISTOR (CHIP) | 15K 1/16W J | | (RD35715) | | 01 |
| R249 | -- | CARBON RESISTOR (CHIP) | 150K 1/16W J | | (RD35815) | | 01 |
| R250 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |
| R253 | -- | CARBON RESISTOR (CHIP) | 3.3K 1/16W D | | (RF45633) | | |
| R254 | -- | CARBON RESISTOR (CHIP) | 150 1/16W D | | (RF45515) | | 01 |
| R255 | -- | CARBON RESISTOR (CHIP) | 1.5K 1/16W D | | (RF45615) | | |
| R256 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R257 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RD35747) | | 01 |
| R258 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RD35747) | | 01 |
| R259 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W D | | (RF45647) | | |
| R260 | -- | CARBON RESISTOR (CHIP) | 680 1/16W D | | (RF45568) | | |
| R261 | -- | CARBON RESISTOR (CHIP) | 1.8K 1/16W D | | (RF45618) | | |
| R262 | -- | CARBON RESISTOR (CHIP) | 680 1/16W J | | (RD35568) | | 01 |
| R263 | -- | CARBON RESISTOR (CHIP) | 1.5K 1/16W J | | (RD35615) | | 01 |
| R264 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R265 | -- | CARBON RESISTOR (CHIP) | 680 1/16W J | | (RD35568) | | 01 |
| R267 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R268 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R269 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R270 | -- | CARBON RESISTOR (CHIP) | 0 1/16W J | | (RD35000) | | 01 |
| R273 | -- | CARBON RESISTOR (CHIP) | 4.7 1/16W J | | (RD35347) | | 01 |
| R277 | -- | CARBON RESISTOR (CHIP) | 47 1/2W J | | (V263940) | | 01 |
| R301 | -- | CARBON RESISTOR (CHIP) | 5.1K 1/16W J | | (RD35651) | | 01 |
| -303 | -- | CARBON RESISTOR (CHIP) | 5.1K 1/16W J | | (RD35651) | | 01 |
| R304 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R305 | -- | CARBON RESISTOR (CHIP) | 100 1/16W J | | (RD35510) | | 01 |
| R306 | -- | CARBON RESISTOR (CHIP) | 5.1K 1/16W J | | (RD35651) | | 01 |
| -308 | -- | CARBON RESISTOR (CHIP) | 5.1K 1/16W J | | (RD35651) | | 01 |
| R309 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R310 | -- | CARBON RESISTOR (CHIP) | 18K 1/16W D | | (RF45718) | | |
| R311 | -- | CARBON RESISTOR (CHIP) | 330 1/16W J | | (RD35533) | | 01 |
| R312 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R313 | -- | CARBON RESISTOR (CHIP) | 3.3K 1/16W J | | (RD35633) | | 01 |
| -316 | -- | CARBON RESISTOR (CHIP) | 3.3K 1/16W J | | (RD35633) | | 01 |
| R317 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| R318 | -- | CARBON RESISTOR (CHIP) | 1.0K 1/16W J | | (RD35610) | | 01 |
| R319 | -- | CARBON RESISTOR (CHIP) | 12K 1/16W J | | (RD35712) | | 01 |
| R320 | -- | CARBON RESISTOR (CHIP) | 12K 1/16W J | | (RD35712) | | 01 |
| R321 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |
| R322 | -- | CARBON RESISTOR (CHIP) | 100K 1/16W J | | (RD35810) | | 01 |
| R323 | -- | CARBON RESISTOR (CHIP) | 3.3K 1/16W J | | (RD35633) | | 01 |
| R324 | -- | CARBON RESISTOR (CHIP) | 3.3K 1/16W J | | (RD35633) | | 01 |
| R325 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W J | | (RD35722) | | 01 |
| R326 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W J | | (RD35722) | | 01 |
| R327 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| -330 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R331 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W J | | (RD35722) | | 01 |
| -334 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W J | | (RD35722) | | 01 |
| R335 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| -338 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| R339 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W J | | (RD35647) | | 01 |
| R340 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W J | | (RD35722) | | 01 |
| R341 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W J | | (RD35647) | | 01 |
| R342 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W J | | (RD35722) | | 01 |
| R343 | -- | METAL OXIDE FILM RESISTOR | 100K 2W J | | (WK03770) | | 01 |
| -346 | -- | METAL OXIDE FILM RESISTOR | 100K 2W J | | (WK03770) | | 01 |
| R347 | -- | CARBON RESISTOR (CHIP) | 10 1/16W J | | (RD35410) | | 01 |
| R348 | -- | CARBON RESISTOR (CHIP) | 10 1/16W J | | (RD35410) | | 01 |
| R349 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| -352 | -- | CARBON RESISTOR (CHIP) | 22 1/16W J | | (RD35422) | | 01 |
| R353 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W J | | (RD35612) | | 01 |
| R354 | -- | CARBON RESISTOR (CHIP) | 1.2K 1/16W J | | (RD35612) | | 01 |
| R355 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W J | | (RD35647) | | 01 |
| R356 | -- | CARBON RESISTOR (CHIP) | 4.7K 1/16W J | | (RD35647) | | 01 |
| R357 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | | 01 |

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| | REF NO. | PART NO. | DESCRIPTION | | | REMARKS | QTY | RANK |
|---|---|---|---|---|---|---|---|---|
| | -364 | VZ37020R | WIRE WOUND RESISTOR | 0.1 5W K | | | | 01 |
| | R365 | -- | CARBON RESISTOR (CHIP) | 1.0 1/16W J | | (RD35310) | | 01 |
| | R366 | -- | CARBON RESISTOR (CHIP) | 1.0 1/16W J | | (RD35310) | | 01 |
| | R367 | -- | METAL OXIDE FILM RESISTOR | 27 2W J | | (WK58150) | | 01 |
| | R368 | -- | CARBON RESISTOR (CHIP) | 1.0 1/16W J | | (RD35310) | | 01 |
| | R369 | -- | CARBON RESISTOR (CHIP) | 1.0 1/16W J | | (RD35310) | | 01 |
| | R370 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | R371 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | R372 | -- | CARBON RESISTOR | 470K 1/4W J | | (HF45847) | | 01 |
| | -379 | -- | CARBON RESISTOR | 470K 1/4W J | | (HF45847) | | 01 |
| | R382 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | R383 | -- | CARBON RESISTOR (CHIP) | 10K 1/16W J | | (RD35710) | | 01 |
| | R384 | -- | CARBON RESISTOR (CHIP) | 27K 1/16W J | | (RD35727) | | 01 |
| | R385 | -- | CARBON RESISTOR (CHIP) | 27K 1/16W J | | (RD35727) | | 01 |
| | R386 | -- | CARBON RESISTOR (CHIP) | 220K 1/16W J | | (RD35822) | | 01 |
| | R387 | -- | CARBON RESISTOR (CHIP) | 18K 1/16W D | | (RD35718) | | 01 |
| | R388 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RD35747) | | 01 |
| | R389 | -- | CARBON RESISTOR (CHIP) | 220K 1/16W J | | (RD35822) | | 01 |
| | R390 | -- | CARBON RESISTOR (CHIP) | 18K 1/16W D | | (RD35718) | | 01 |
| | R391 | -- | CARBON RESISTOR (CHIP) | 47K 1/16W D | | (RD35747) | | 01 |
| | R392 | -- | CARBON RESISTOR (CHIP) | 15K 1/16W J | | (RD35715) | | 01 |
| | R393 | -- | CARBON RESISTOR (CHIP) | 15K 1/16W J | | (RD35715) | | 01 |
| | R394 | -- | CARBON RESISTOR (CHIP) | 560K 1/10W D | | (V646540) | | |
| | R395 | -- | CARBON RESISTOR (CHIP) | 560K 1/10W D | | (V646540) | | |
| | R396 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W D | | (RF45722) | | |
| | R397 | -- | CARBON RESISTOR (CHIP) | 22K 1/16W D | | (RF45722) | | |
| | R398 | -- | CARBON RESISTOR (CHIP) | 27K 1/16W J | | (RD35727) | | 01 |
| | R399 | -- | CARBON RESISTOR (CHIP) | 27K 1/16W J | | (RD35727) | | 01 |
| ⚠ | RY101 | -- | RELAY | DC DI24D1-O(M) | | (WJ56900) | | 05 |
| ⚠ | RY102 | -- | RELAY | DC DI24D1-O(M) | | (WJ56900) | | 05 |
| ⚠ | RY103 | -- | RELAY | DC ALK3223 | | (WJ58430) | | 05 |
| ⚠ | T201 | -- | POWER TRANSFORMER | UL CSA CE DENAN A | | (X8693A0) | | 08 |
| ⚠ | T301 | -- | TRANSFORMER | | | (X2583A0) | | 04 |
| ⚠ | T302 | -- | POWER TRANSFORMER | UL CE A | | (X8549A0) | | |
| ⚠ | T303 | -- | POWER TRANSFORMER | UL CE A | | (X8549A0) | | |
| ⚠ | TH101 | -- | THERMISTOR | 20ohm 20D2-11LT3C | | (WK83630) | | 03 |
| | W101 | -- | CONNECTOR ASSEMBLY PS | B&B | | (WK17900) | | 01 |
| | W102 | -- | CONNECTOR ASSEMBLY PS | B&B | | (WK17910) | | 01 |
| | | | | | | | | |
| | | V8746701 | DC FAN | FBA08A24H1TZ | | | 2 | 08 |
| | | | | | | | | |
| ⚠ | | WK602800 | POWER CORD ASSEMBLY | UL18A | | U | | 10 |
| ⚠ | | WC901301 | POWER SUPPLY CORD | CHN 3 2.5m | | CHN | | 14 |
| ⚠ * | | WR856500 | POWER CORD ASSEMBLY | J 20A | | J | | |

✻ : New Parts

RANK: Japan only

# POWERED TD CONTROLLER

# NXAMP4x1

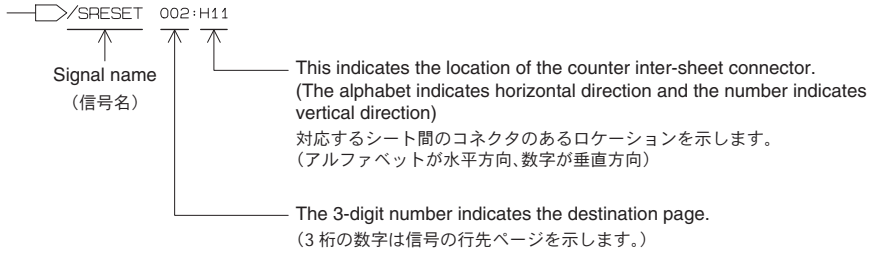
# CIRCUIT DIAGRAM

## ■ CONTENTS（目次）


IC & DIODE FIGURES（外形図）.....2
WIRING DIAGRAM（基板結線図）.....3
BLOCK DIAGRAM（ブロックダイアグラム） 1/5 .....4
2/5 .....5
3/5 .....6
4/5 .....7
5/5 .....8
OVERALL CIRCUIT DIAGRAM（総回路図）
CONTROL 1/6 .....9
2/6 .....10
3/6 .....11
4/6 .....12
5/6 .....13
6/6 .....14
INANL .....15
OUTANL .....16
PN-AN .....17
RS232-GPI .....18
OPT-AN, NX-DFLT .....19
PAANL .....20
PSANL 1/3 .....21
2/3 .....22
3/3 .....23


### Notation for Circuit Diagrams（回路図表記上の注意）

How to identify inter-sheet connectors（シート間コネクタの読み方について）



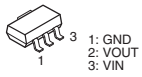

## ■ WARNING（注意）

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

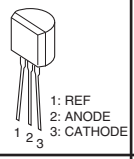
⚠ 印の商品は、安全を維持するために重要な部品です。交換する場合は、安全のために必ず指定の部品をご使用ください。

# ■ IC & DIODE FIGURES (外形図)

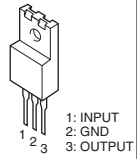
- LD1117STR (X8495A0)
  REGULATOR
  CONTROL: IC024



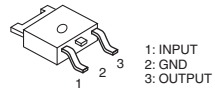

- NJM431U (X6770A0)
  REGULATOR
  PSANL: IC204



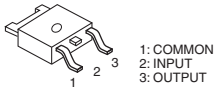

- NJM7815FA (XD853A0)
  REGULATOR +15V
  PSANL: IC202, 203



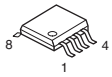

- NJM78M09DL1A (XZ940A0)
  REGULATOR +15V
  CONTROL: IC006



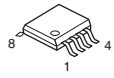

- NJM79M09DL1A (X5366A0)
  REGULATOR -9V
  CONTROL: IC007



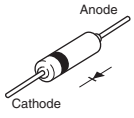

- NJU7630-M (X8682A0)
  REGULATOR -9V
  PSANL: IC205



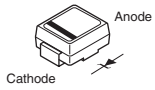
- PQ1CX12H2ZP (X6188A0)
  REGULATOR -9V
  PSANL: IC208



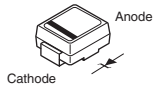
- 1SS244 (WA18030)
  DIODE
  PSANL: D209, 212, 227, 301, D302



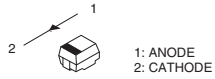

- 1SMB5951BT3G (WK91200)
  ZENER DIODE 120V
  PSANL: D206




- 1SMB5953BT3G (WK91190)
  ZENER DIODE 150V
  PSANL: D207




- 1SR154-400 (VT53250)
  DIODE
  PSANL: D201
- D1F60 (VS20110)
  DIODE
  PAANL: D443-448

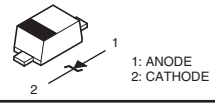



- 1SS355 (VT33290)
  DIODE
  INANL: D701-708
  OUTANL: D801-804
  PAANL: D401-404, 406, 407, D409-414, 439-442, D450-453
  PSANL: D101, 102
- UDZS 3.6B (VU17150)
  ZENER DIODE 3.6V
  PSANL: D216

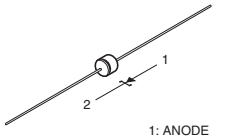
- UDZS 3.9B (VU17160)
  ZENER DIODE 3.9V
  PAANL: D405, 408, 415, D420, 421, 426
- UDZS 5.6B (VU17200)
  ZENER DIODE 5.6V
  PAANL: D456
- UDZS6.8B (VU17220)
  ZENER DIODE 6.8V
  PAANL: D416, 419, 422, 425

- UDZS12B (VU17280)
  ZENER DIODE 12V
  PSANL: D303, 304, 330, 332
- UDZS15B (VU17300)
  ZENER DIODE 15V
  PAANL: D449, 454, 455
- UDZS16B (VU17310)
  ZENER DIODE 16V
  PSANL: D329, 331

- RB551V-30 (V963430)
  SCHOTTKY DIODE
  PSANL: D333, 334

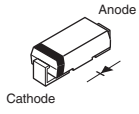



- AG01A WS (V862980)
  DIODE
  PAANL: D457
  PSANL: D208, 307, 308
- RL3A (V862970)
  DIODE
  PSANL: D313-316

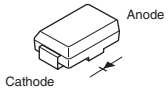



- D1FK60-5063 (WJ45930)
  DIODE
  PAANL: D427-430
- D1FL20U-5063 (VV46300)
  DIODE
  PSANL: D210, 211, 215, 309-312, D317, 318, 323-328

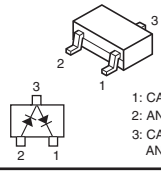
- RB160L-40 TE25 (VS59760)
  DIODE
  CONTROL: D001-004
  PSANL: D218, 219, 221-224, D226



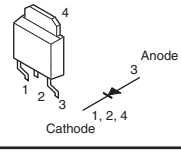

- D2F60-5063 (WK83640)
  DIODE
  PSANL: D202-205



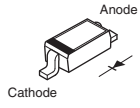

- DAN217 (VV55630)
  DIODE ARRAY 0.3AX2
  CONTROL: DA001-036



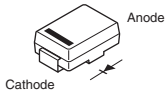

- DE3S6M (WE49220)
  DIODE
  PSANL: D220



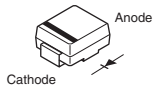

- HSU83 ((WD84430)
  DIODE
  PAANL: D417, 418, 423, 424, D431-438




- SJPX-H3 VR (WK83420)
  DIODE
  PSANL: D214




- SMP100LC-25 (WJ52830)
  DIODE
  CONTROL: D005, 006

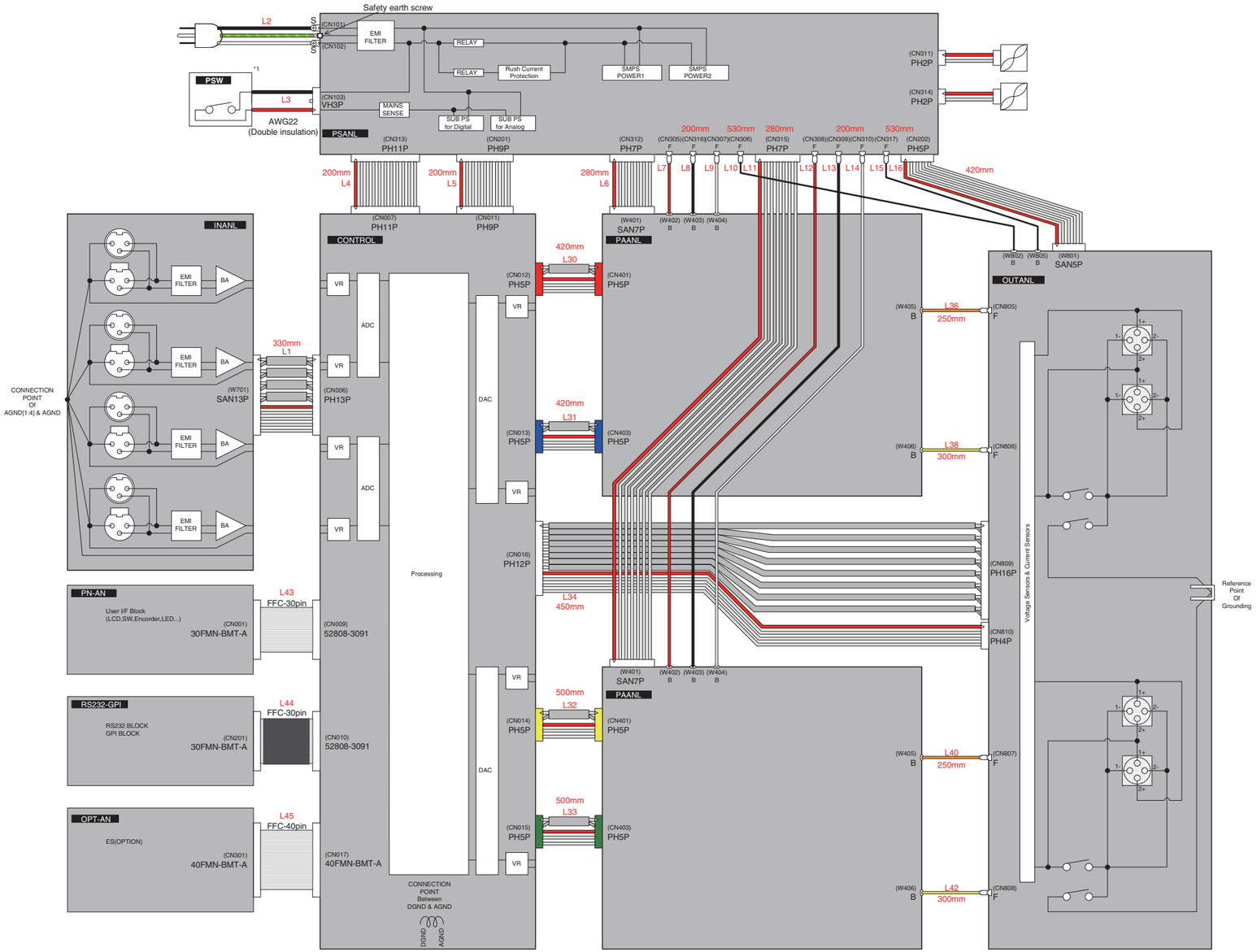


# ■ WIRING DIAGRAM（結線図）

**Note:**

B : Board in connector
F : Fasten terminal
S : Screw terminal

| No. | Part No. | Destination |
|---|---|---|
| L1 | WK02070 | - |
| L2 | WK66050 | U |
| | WK66040 | CHN |
| L3 | WK94710 | - |
| L4 | WK68760 | - |
| L5 | WK68770 | - |
| L6 | WK14210 | - |
| L7 | WM04870 | - |
| L8 | WK16800 | - |
| L9 | WK16810 | - |
| L10 | WK16820 | - |
| L11 | WK14210 | - |
| L12 | WM04870 | - |
| L13 | WK16800 | - |
| L14 | WK16810 | - |
| L15 | WK166820 | - |
| L16 | WKK14200 | - |
| L30 | WK02080 | - |
| L31 | WKK90770 | - |
| L32 | WK90790 | - |
| L33 | WK17110 | - |
| L34 | WK02090 | - |
| L36 | WN52530 | - |
| L38 | WK16830 | - |
| L40 | WN52530 | - |
| L42 | WK16830 | - |
| L43 | WK02100 | - |
| L44 | WK02110 | - |
| L45 | WK02120 | - |



# ■ BLOCK DIAGRAM 1/5（ブロックダイアグラム 1/5）

Inter-Block Signals

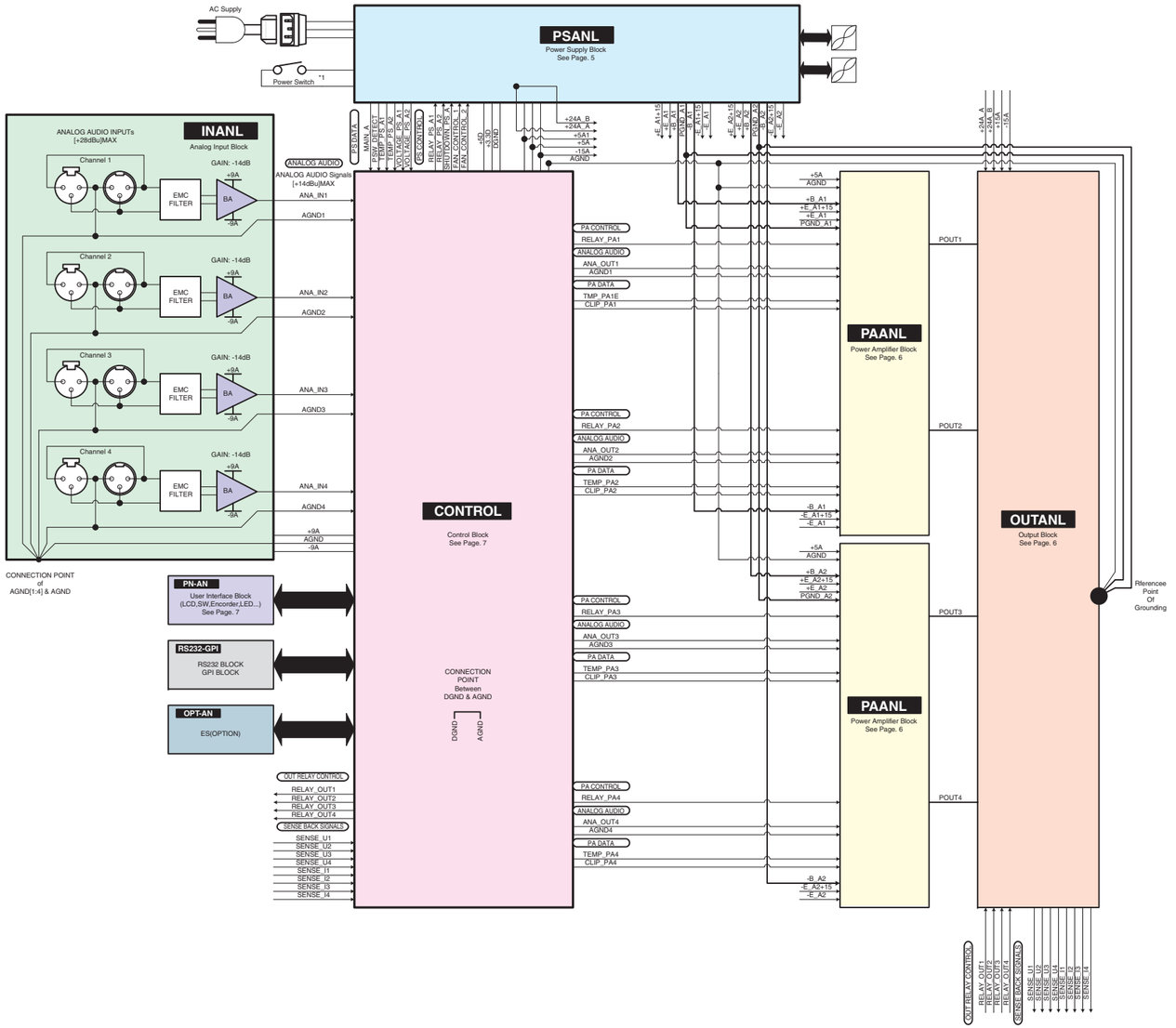
| | |
|---|---|
| INANH -> CONTROL | |
| ANA_IN[1:4] | Analog Audio Signals |
| PAANL -> CONTROL | |
| TEMP_PA[1:4] | Temperature Data of Power Amplifier Units |
| CLIP_PA[1:4] | Clip Signals of Power Amplifier Units |
| OUTANL -> CONTROL | |
| SENSE_U[1:4] | SenseBack Signals of Amplifier Output Voltage |
| SENSE_I[1:4] | SenseBack Signals of Amplifier Output Current |
| PSANL -> COLNTRO | |
| MAINS_A | MAINS Data |
| PSW_DETECT | Status of Power Switch |
| TEMP_PS_A[1:2] | Temperature Signals of Power Supply Units |
| VOLTAGE_PS_A[1:2] | Output Voltage data of Power Supply Units |
| CONTROL -> PAANL | |
| ANA-OUT[1:4] | Analog Audio Signals |
| RELAY_PA1[1:4] | Control Signals for Relays on Power Amplifier Units |
| CONTROL -> OUTANL | |
| RELAY_OUT[1:4] | Control Signals for Output Relays |
| CONTROL -> PSANL | |
| RELAY_PS_A[1:2] | Control Signals for Relays on Power Supply Unit |
| SHUTDOWN_PS_A | Shutdown Signals for Power Supply Ciricuits |
| FAN_CONTROL_[1:2] | FAN speed control signals |
| PAANL -> OUTPAL | |
| POUT[1:4] | Output of Power Amplifier Units |

Power Supply Lines

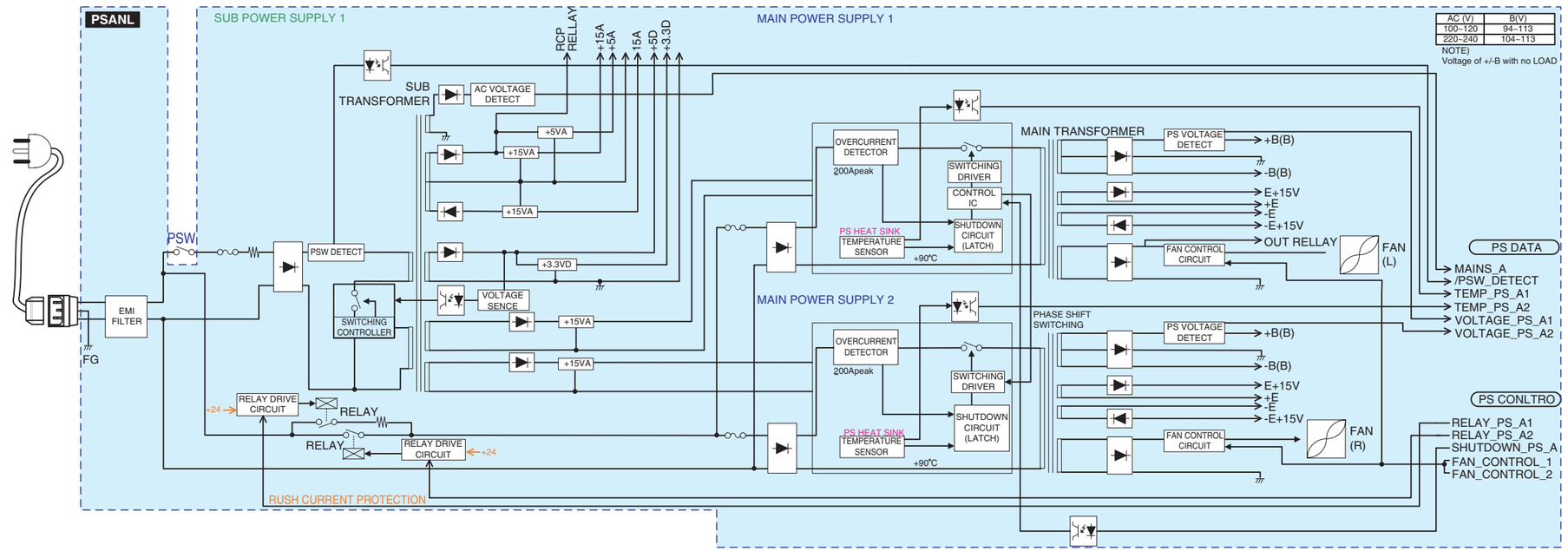
| | |
|---|---|
| +24A_A<br>+24A_B<br>+15A<br>+9A<br>+5A<br>-9A<br>-15A | for Small Signal Analog Circuits |
| +5D<br>+3.3D | for Digital Circuits |
| +B_A[1:2] | Positive Rail Voltage Line for Power Amplifier Units |
| -B_A[1:2] | Negative Rail Voltage Line for Power Amplifier Units |
| +E_A[1:2]+15<br>+E_A[1:2]<br>-E_A[1:2]+15<br>-E_A[1:2] | For EEEngine Drive |

GND Lines

| | |
|---|---|
| AGND[1:4] | for Analog Audio Signals of Each Channnel |
| AGND | for Common Analog Circuits |
| DGND | for Digital Circuits |
| PGND_A[1:2] | Reference Voltage of Main Power Supplies |

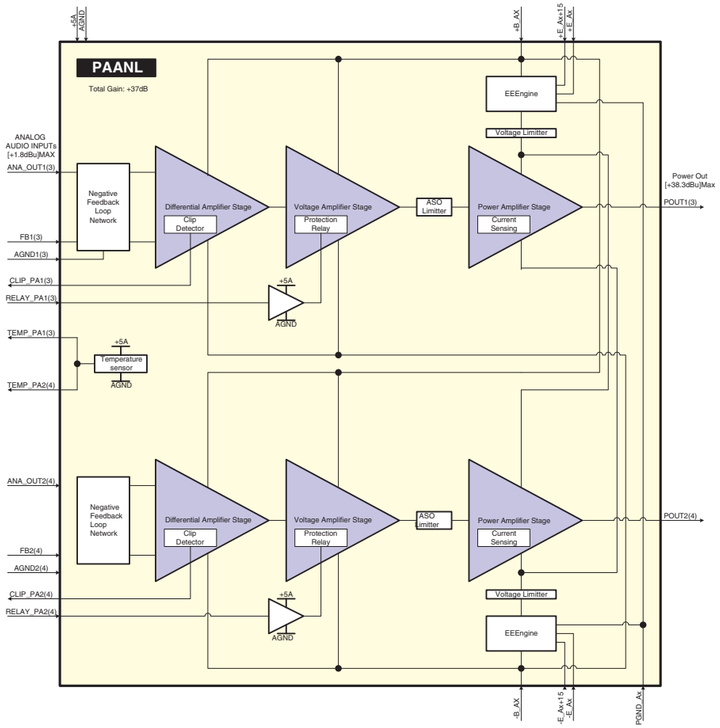


## ■ BLOCK DIAGRAM 2/5（ブロックダイアグラム 2/5）

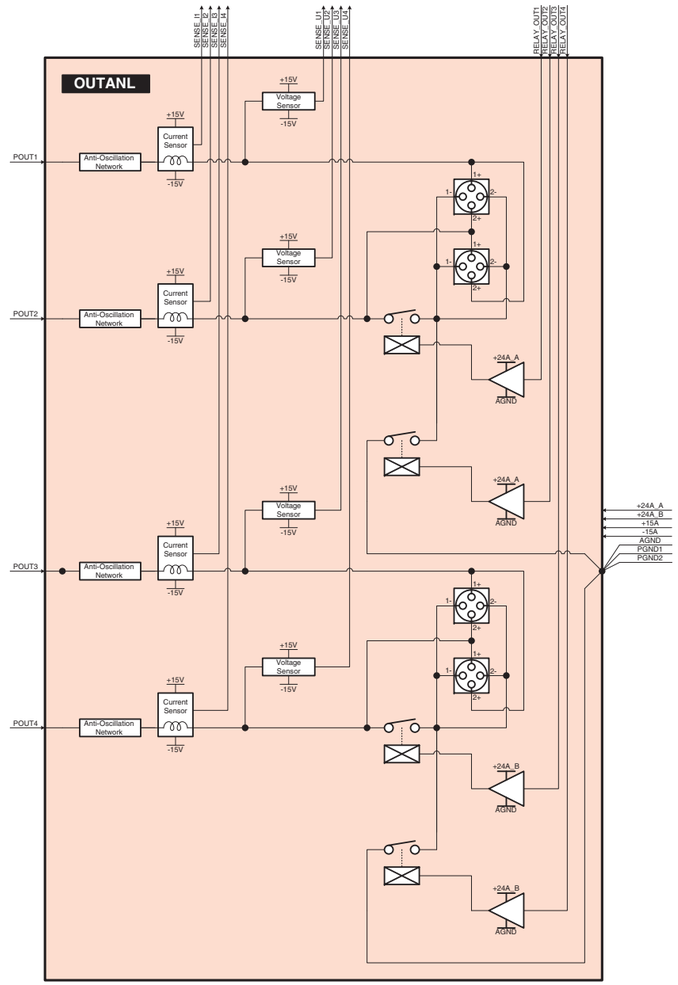


# ■ BLOCK DIAGRAM 3/5（ブロックダイアグラム 3/5）

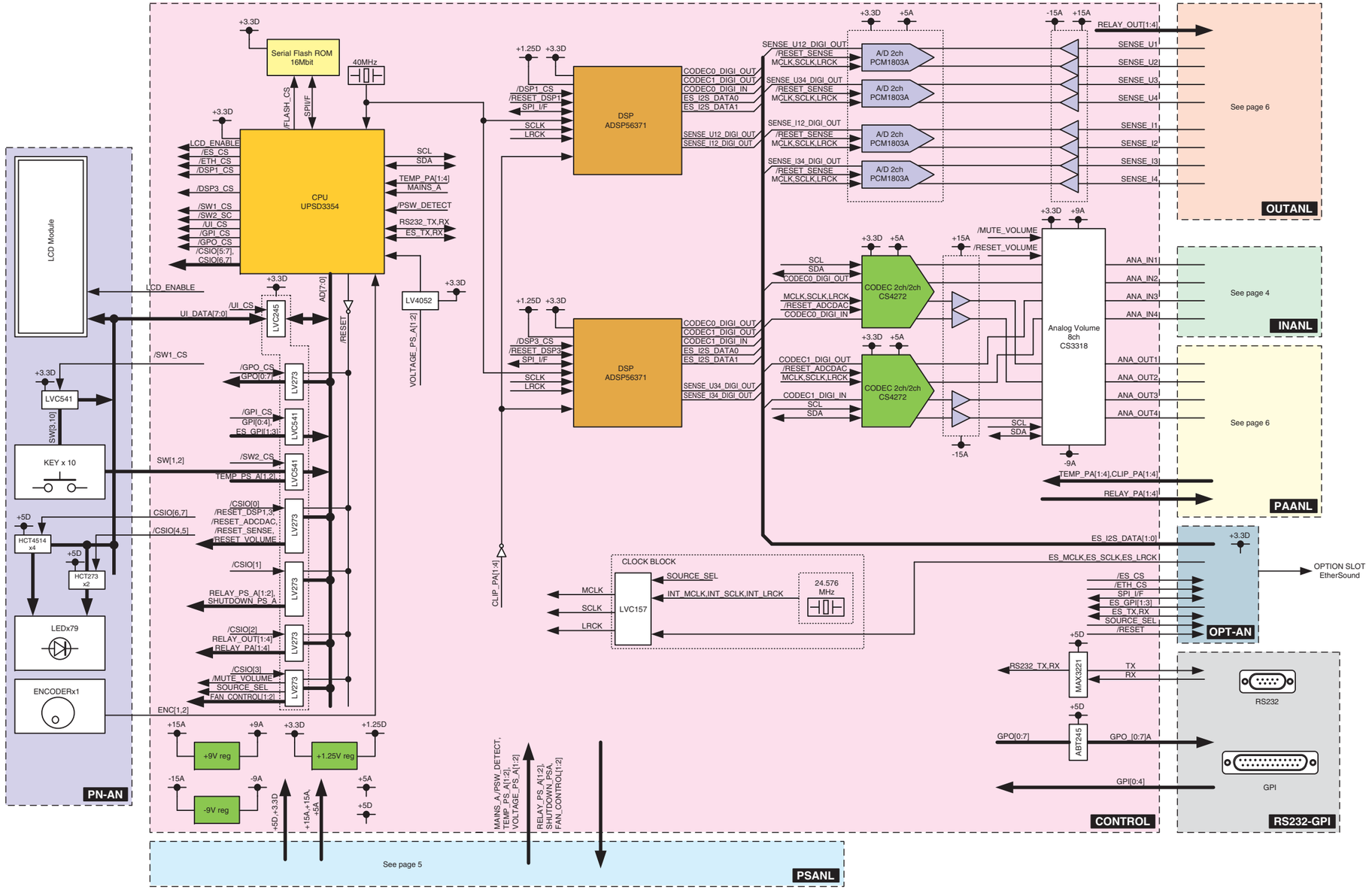
PAANL




OUTANL



# ■ BLOCK DIAGRAM 4/5（ブロックダイアグラム 4/5）

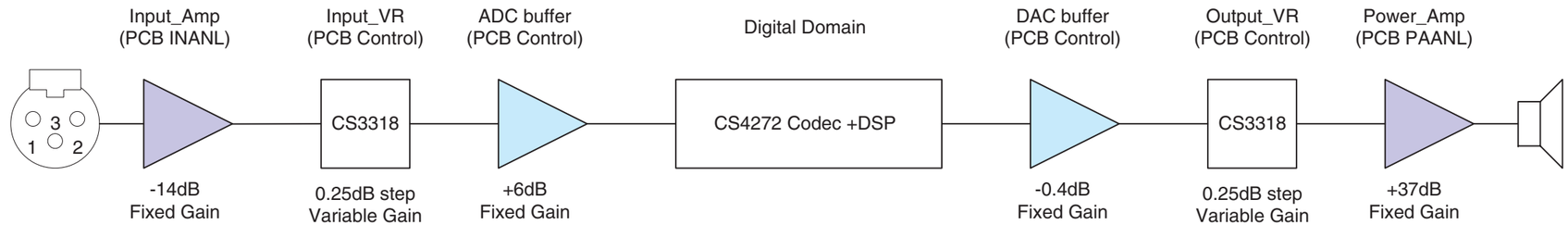


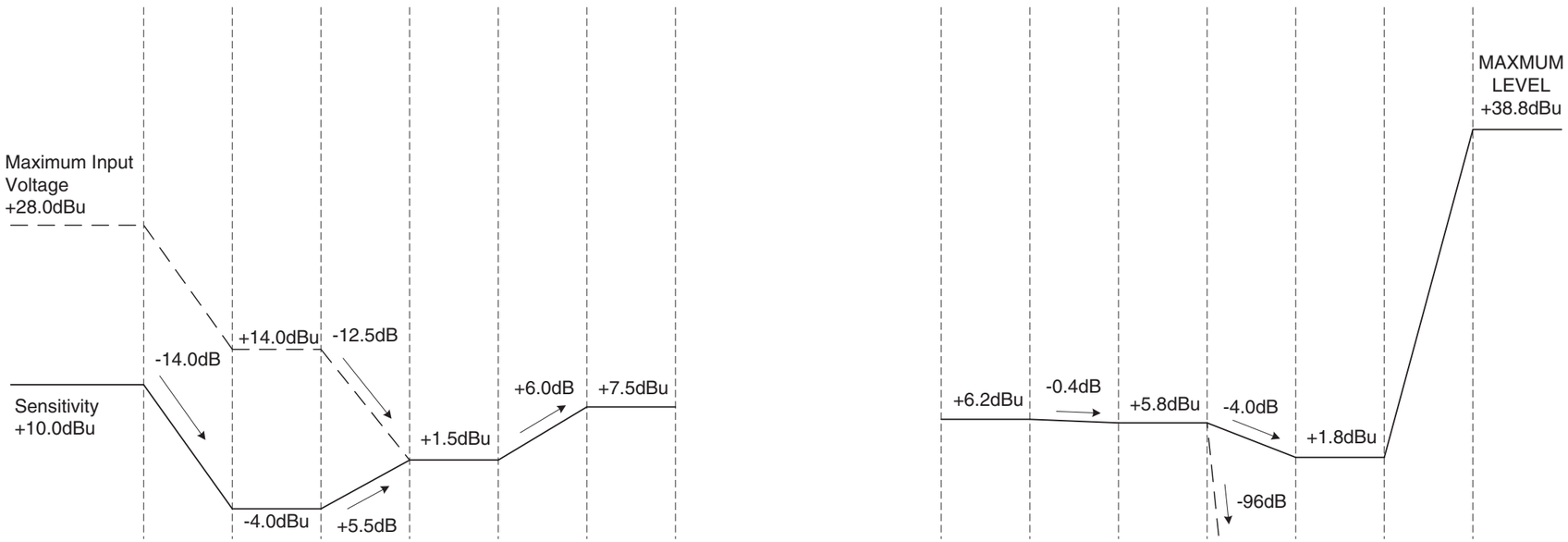

28CA1-2001022111-40

# ■ BLOCK DIAGRAM 5/5（ブロックダイアグラム 5/5）

## NXAMP4x1 LEVEL DIAGRAM

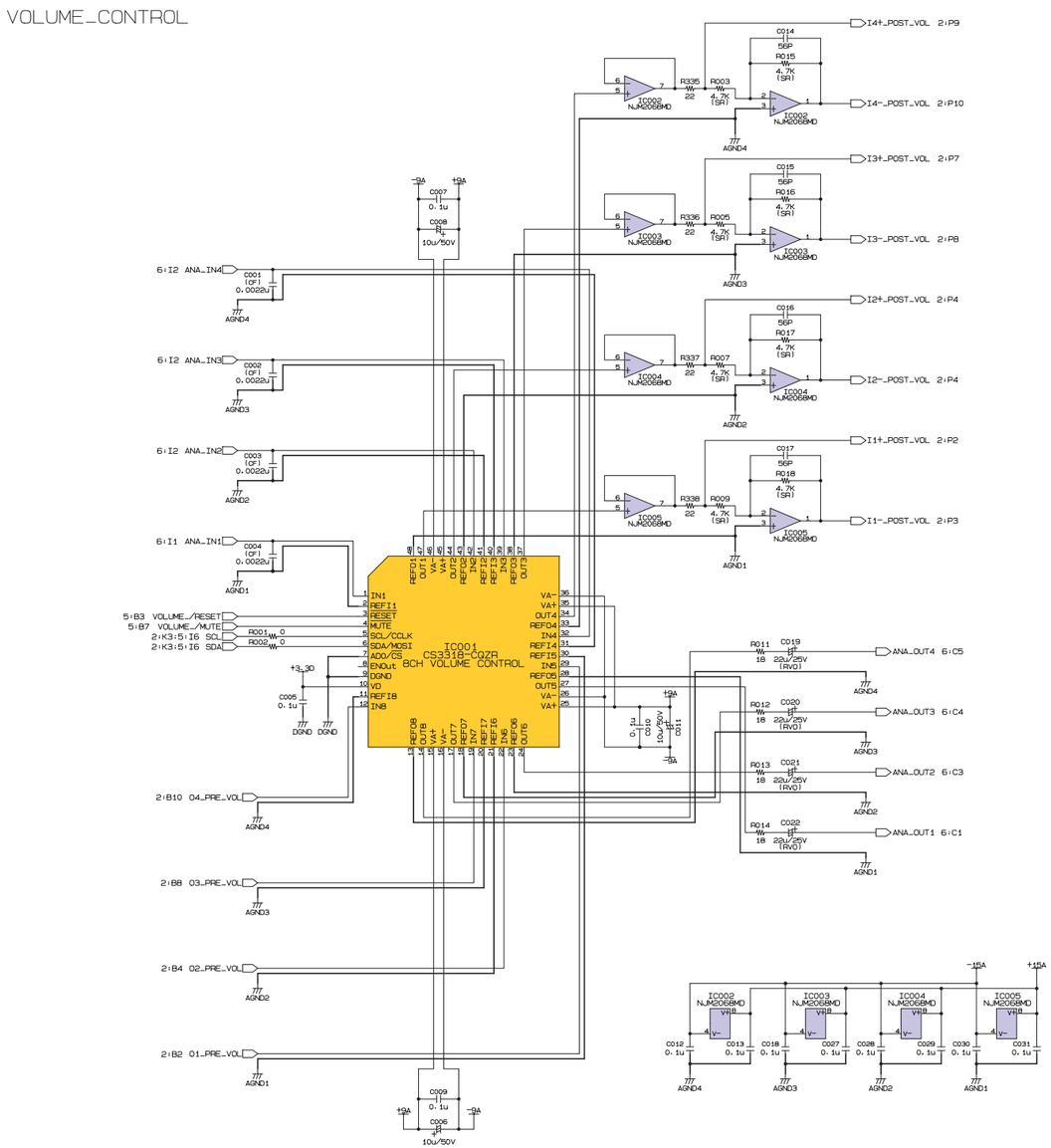
This level diagram is for the purpose of circuit design only.
The actual gain structure will depend on the firmware that is used.



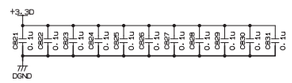




**Note:**
The solid line shows the gain structure in the analog test mode of the test program mode.
The broken line shows an example  in the setting that allows the maximum input signal level.

# ■ CIRCUIT DIAGRAM 1/15 (回路図 1/15) (CONTROL 1/6)




[For EMC]

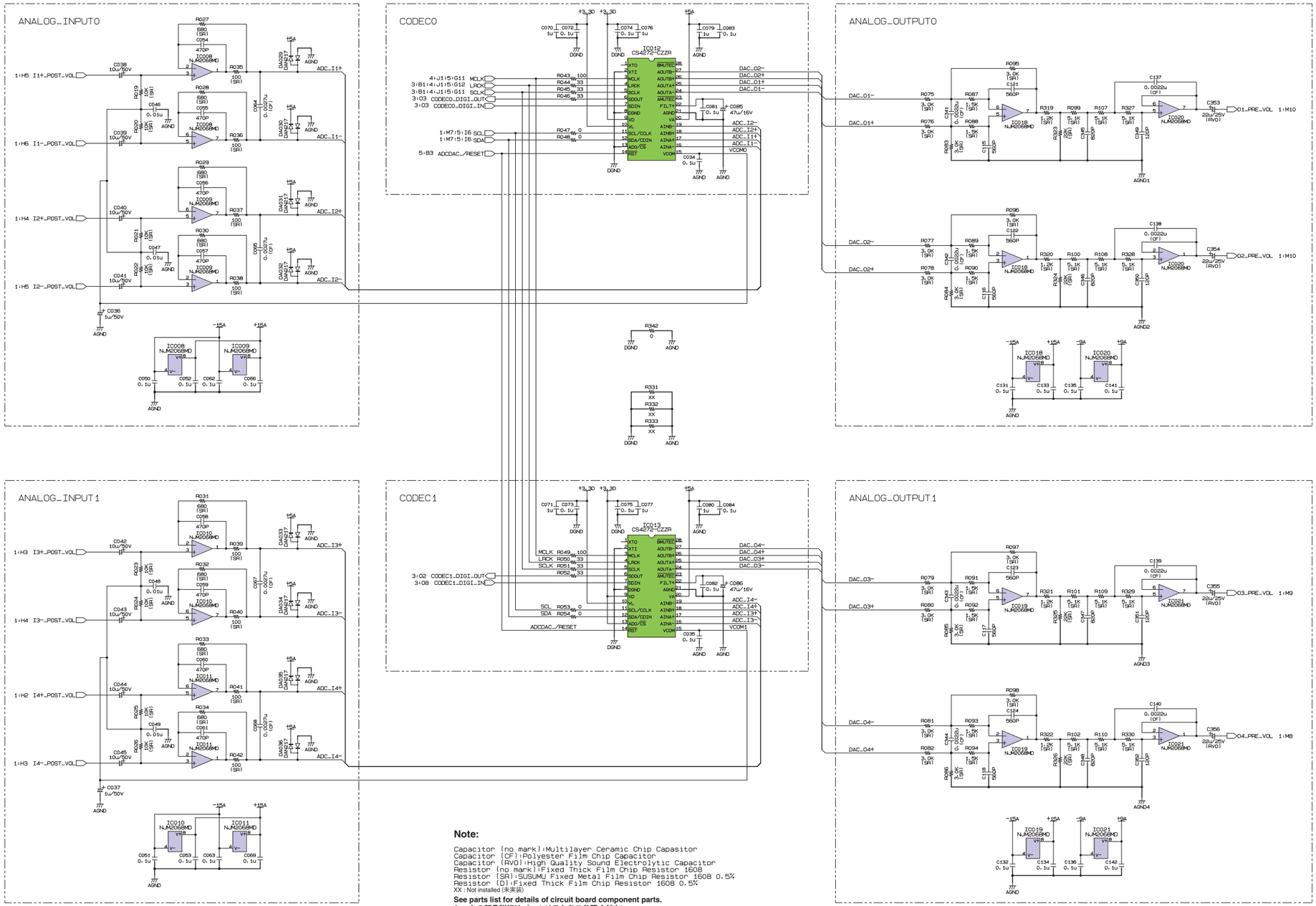


**Note:**

Capacitor (no mark):Multilayer Ceramic Chip Capasitor
Capacitor (CF):Polyester Film Chip Capacitor
Capacitor (RVO):High Quality Sound Electrolytic Capacitor
Resistor (no mark):Fixed Thick Film Chip Resistor 1608
Resistor (SR):SUSUMU Fixed Metal Film Chip Assistor 1608 0.5%

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

# ■ CIRCUIT DIAGRAM 2/15（回路図 2/15）(CONTROL 2/6)

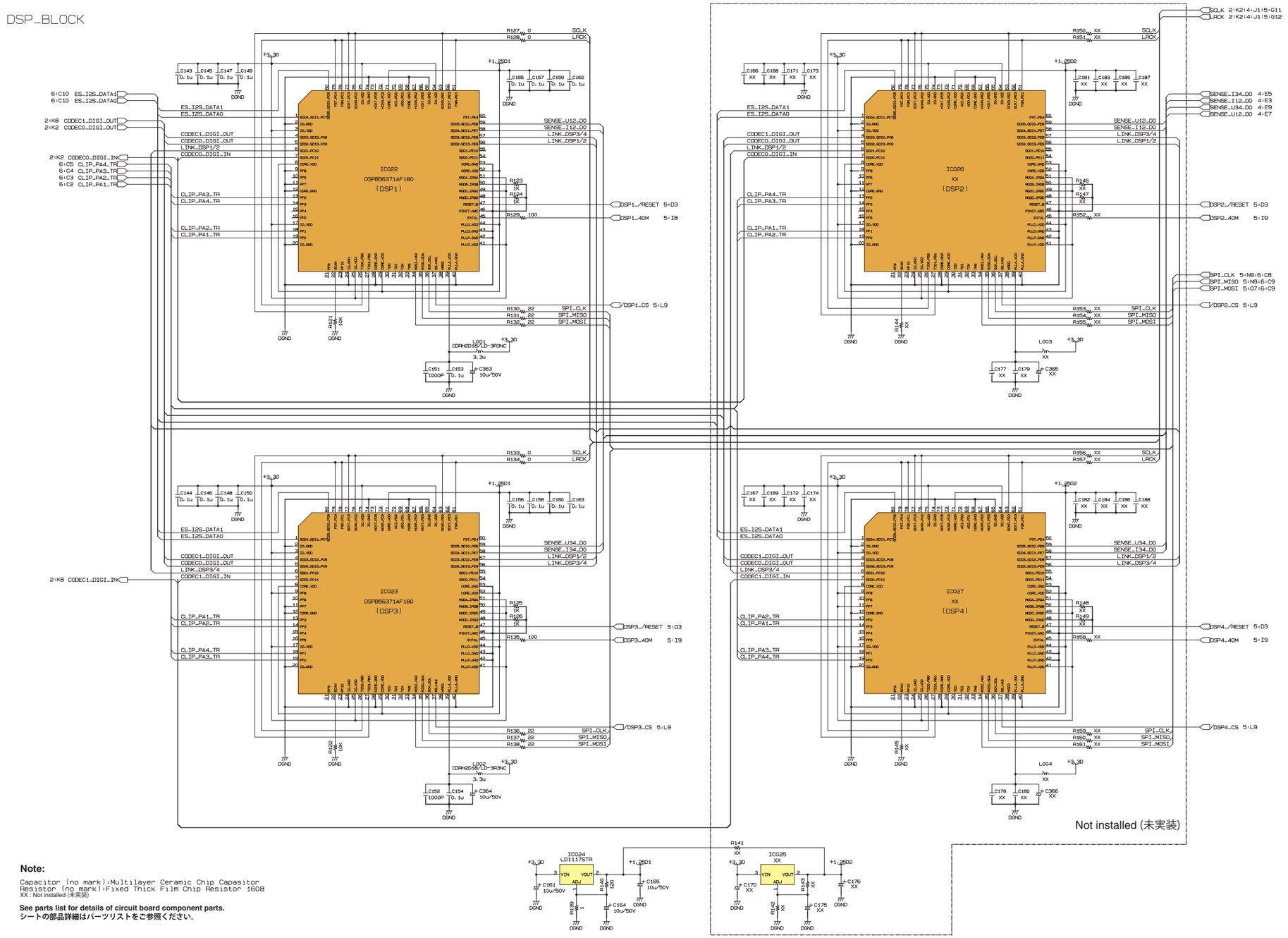



**Note:**

Capacitor (no mark):Multilayer Ceramic Chip Capasitor
Capacitor (CF):Polyester Film Chip Capacitor
Capacitor (RVO):High Quality Sound Electrolytic Capacitor
Resistor (no mark):Fixed Thick Film Chip Resistor 1608
Resistor (SR):SUSUMU Fixed Metal Film Chip Resistor 1608 0.5%
Resistor (D):Fixed Thick Film Chip Resistor 1608 0.5%
XX : Not installed (未実装)

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

# ■ CIRCUIT DIAGRAM 3/15 (回路図 3/15) (CONTROL 3/6)

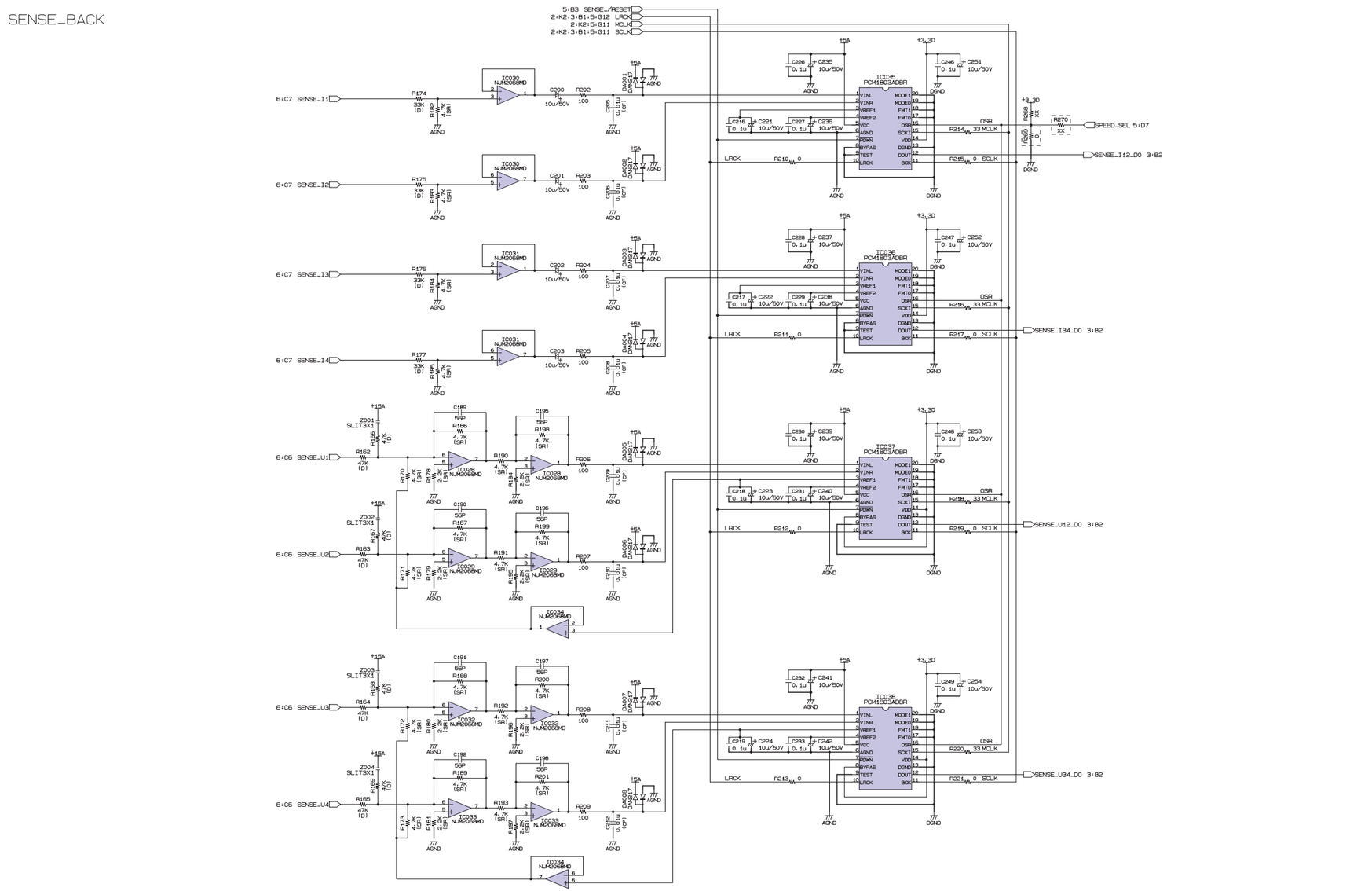



**Note:**

Capacitor (no mark):Multilayer Ceramic Chip Capasitor
Resistor (no mark):Fixed Thick Film Chip Resistor 1608
XX : Not installed (未実装)

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

# ■ CIRCUIT DIAGRAM 4/15（回路図 4/15）(CONTROL 4/6)



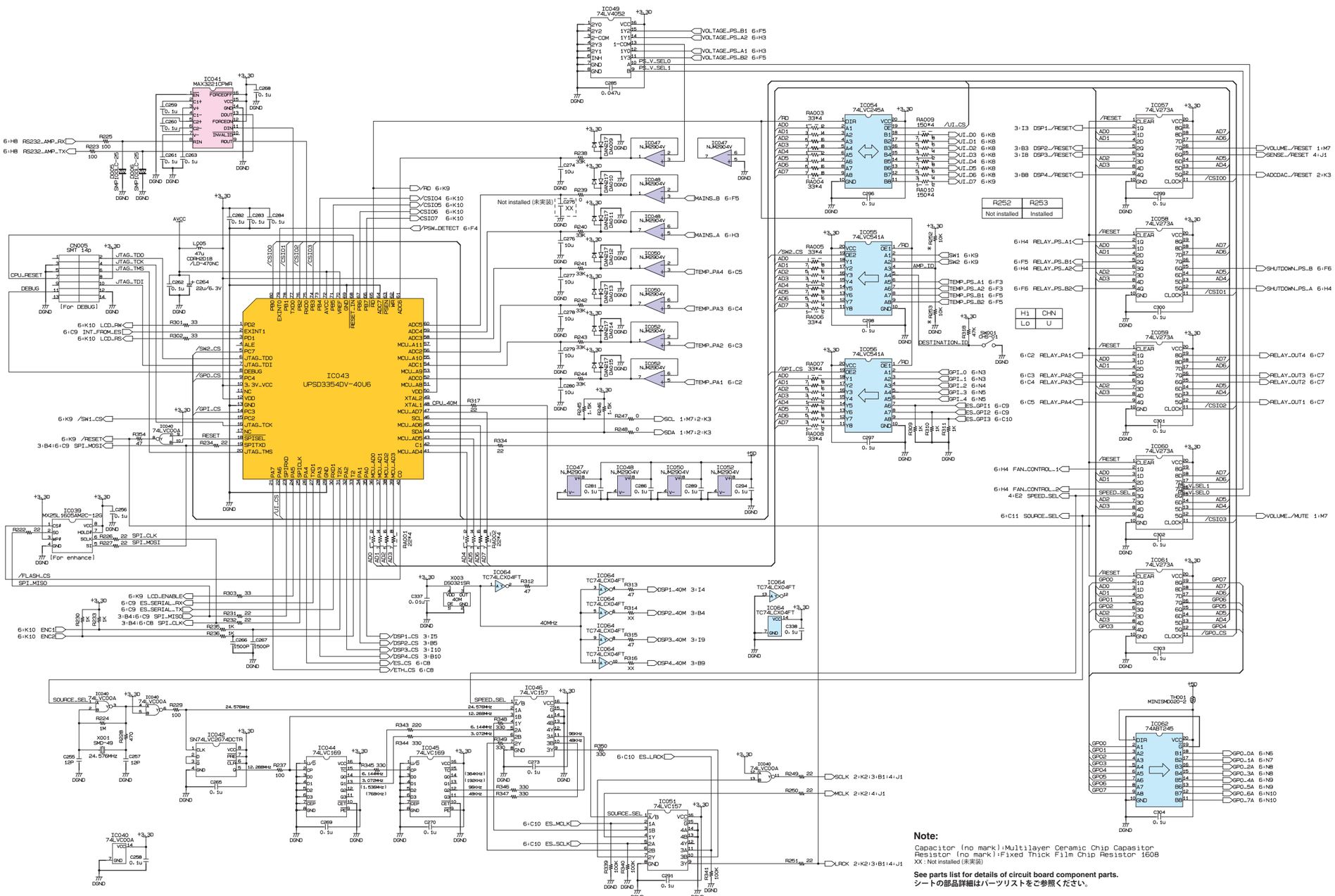

**Note:**

Capacitor (no mark):Multilayer Ceramic Chip Capasitor
Capacitor (CF):Polyester Film Chip Capacitor
Resistor (no mark):Fixed Thick Film Chip Resistor 1608
Resistor (SR):SUSUMU Fixed Metal Film Chip Resistor 1608 0.5%
Resistor (D):Fixed Thick Film Chip Resistor 1608 0.5%
XX : Not installed (未実装)

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

# ■ CIRCUIT DIAGRAM 5/15 (回路図 5/15) (CONTROL 5/6)

CPU Peripheral

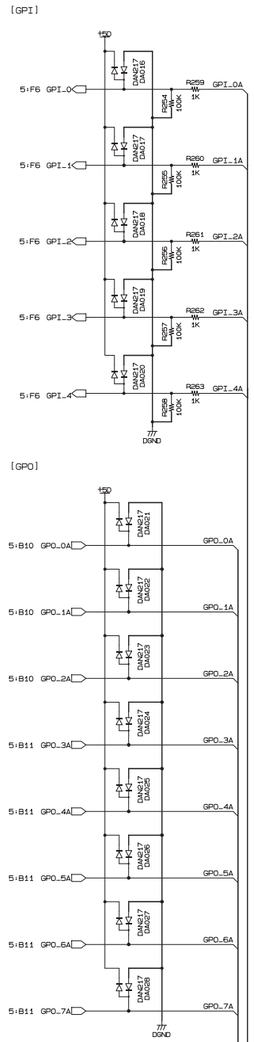



28CC1-2001022127-50 ⚠3

# ■ CIRCUIT DIAGRAM 6/15（回路図 6/15）(CONTROL 6/6)

GPIO

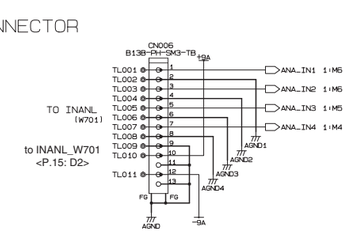
[GPI]

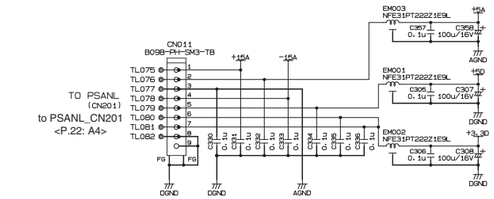


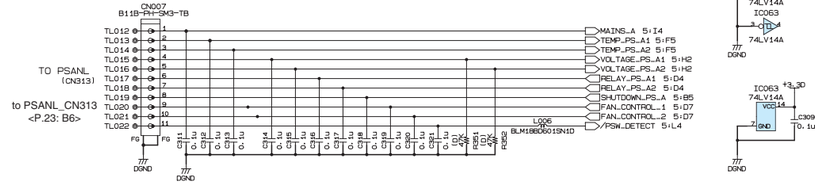

[GPO]

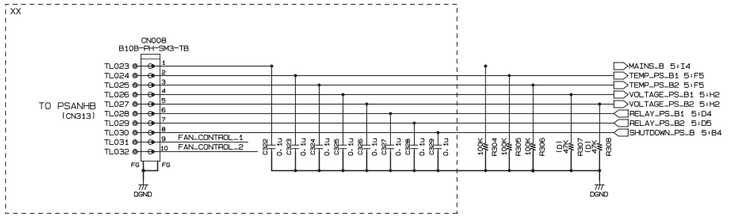


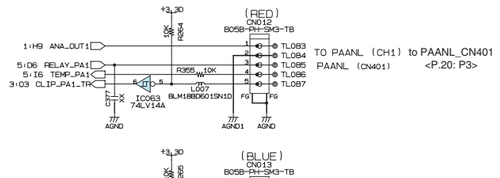

CONNECTOR

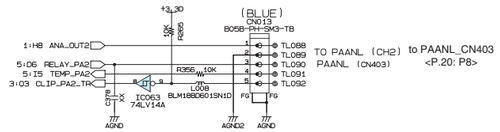


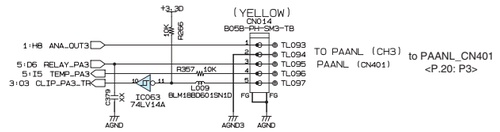



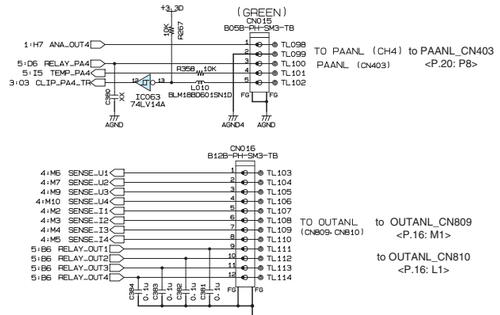



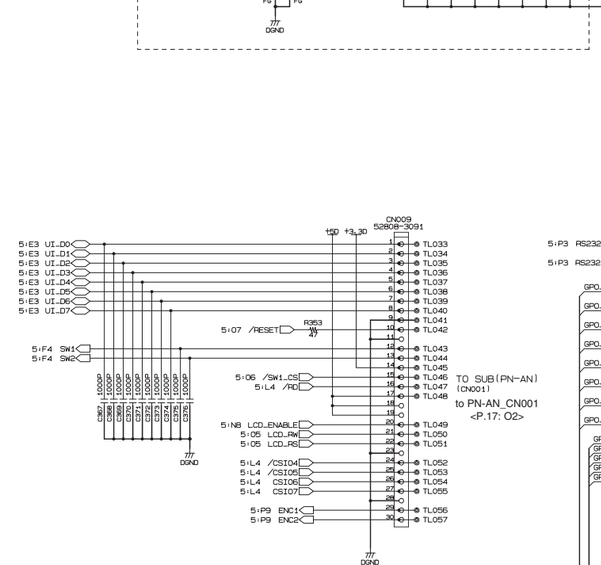



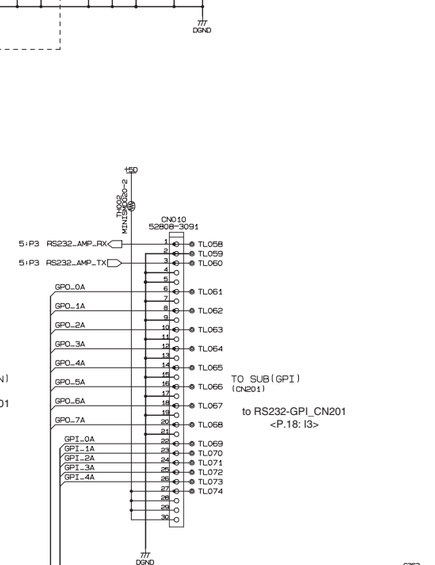





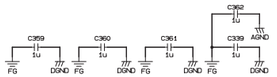








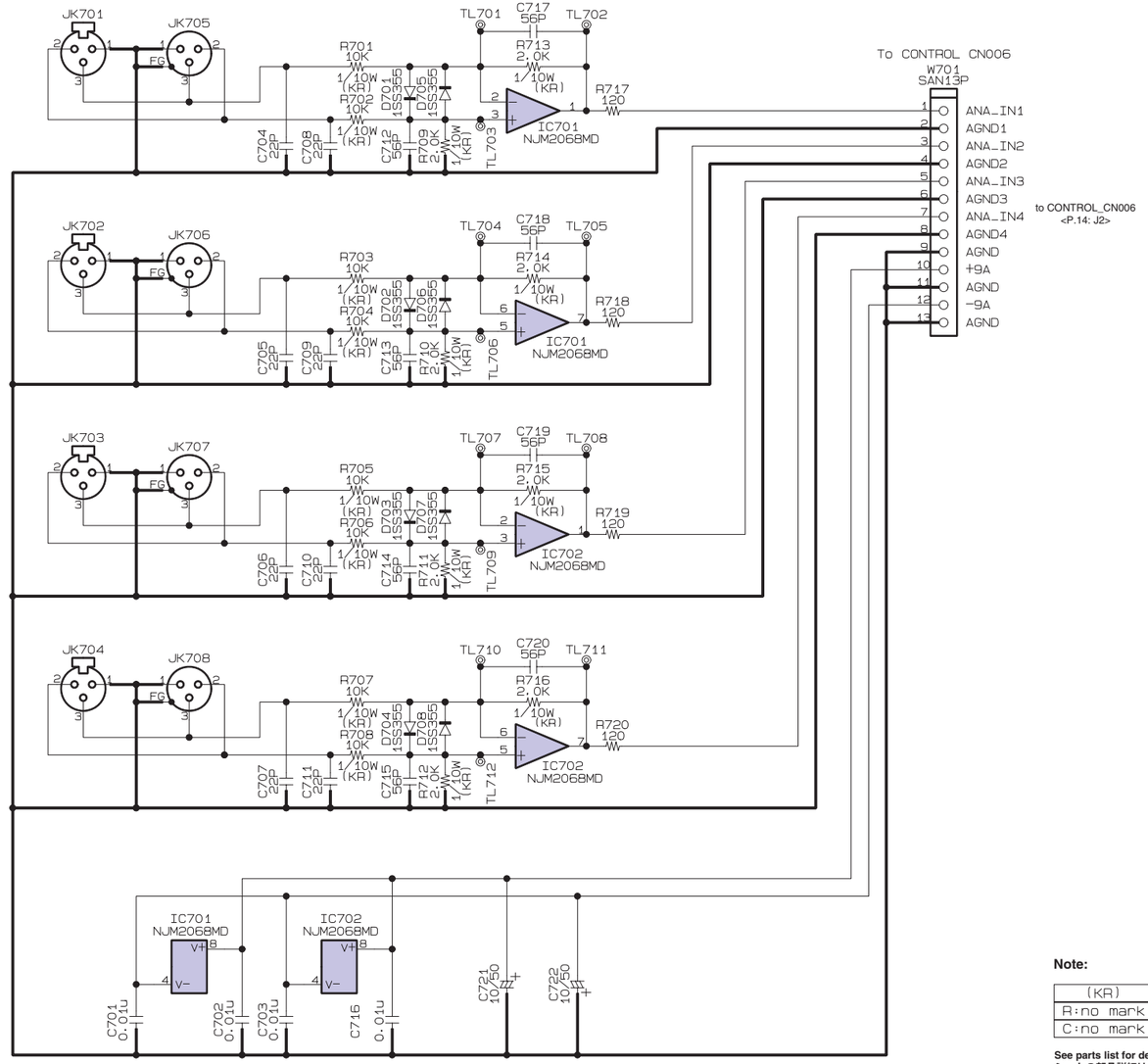



**Note:**

Capacitor (no mark):Multilayer Ceramic Chip Capacitor
Resistor (no mark):Fixed Thick Film Chip resistor 1608
XX : Not installed (未実装)

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

# ■ CIRCUIT DIAGRAM 7/15 (回路図 7/15) (INANL)

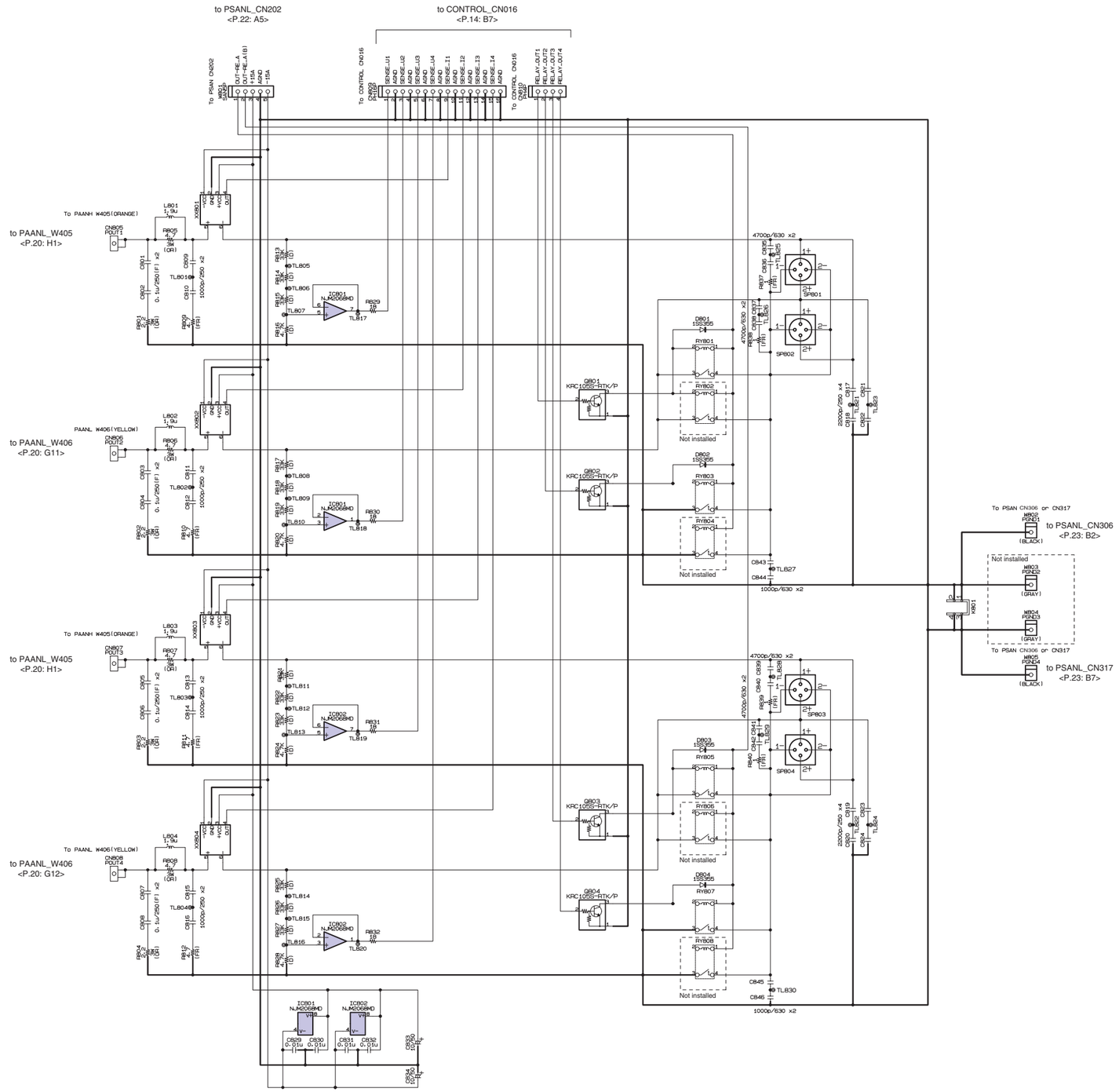



**Note:**

| | |
|---|---|
| (KR) | KAMAYA Thick Film Chip Resistor 2125 0.5% |
| R:no mark | Fixed Thick Film Chip Resistor 1608 |
| C:no mark | Multilayer Ceramic Chip Capacitor |

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

# ■ CIRCUIT DIAGRAM 8/15 (回路図 8/15) (OUTANL)




**Note:**

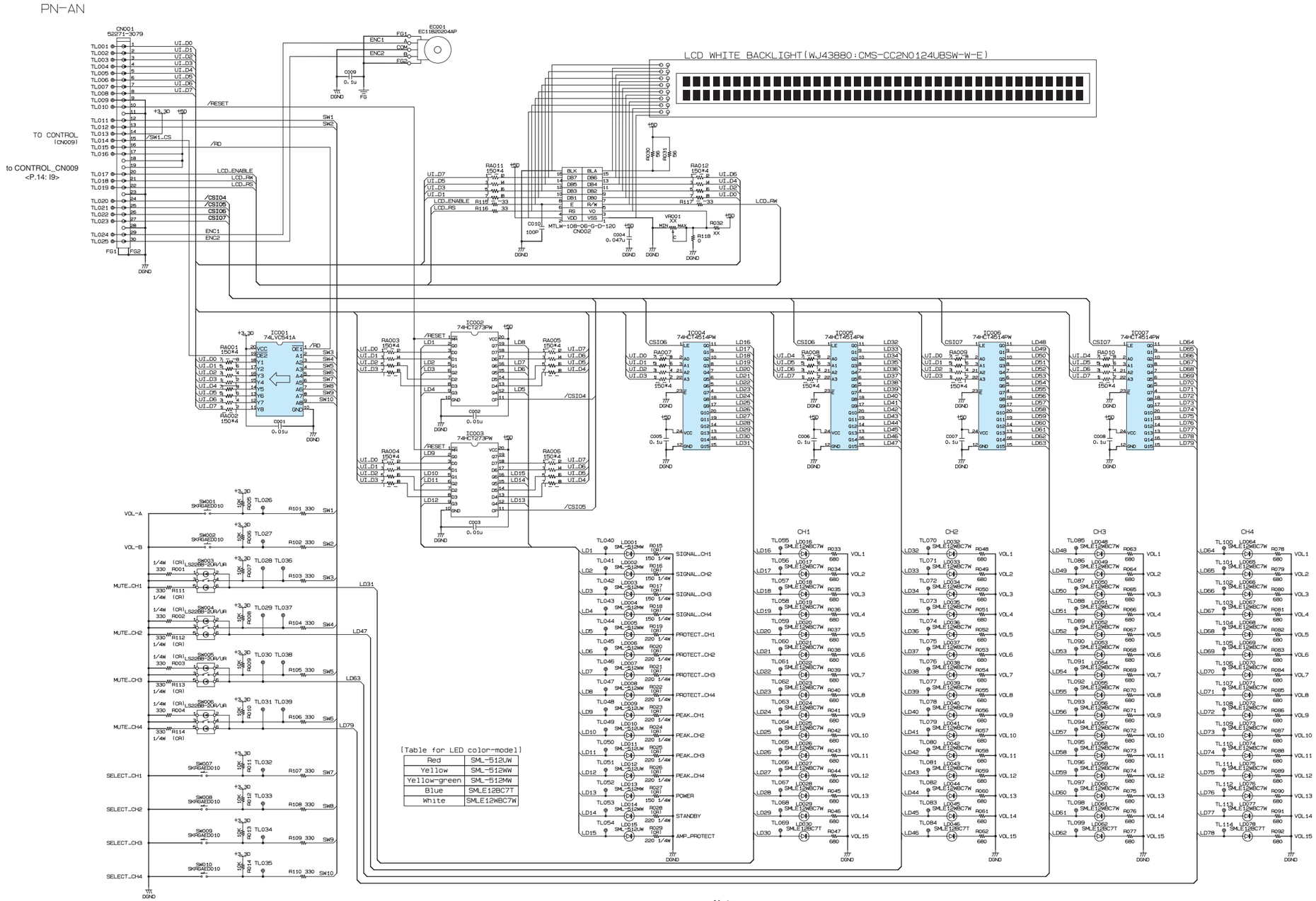
| | |
|---|---|
| (OR) | Fixed Metal Oxide Film Resistor |
| (FR) | Fixed Carbon Film Resistor Flame Retardant type |
| (D) | Fixed Thick Film Chip Resistor 1608 0.5% |
| (F) | Polyester Film Capacitor |
| Pink mark | Fixed Thick Film Chip Resistor 1608 |
| Cino mark | Multilayer Ceramic Chip Capacitor |

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

28CC1-2001022114-20 1

# ■ CIRCUIT DIAGRAM 9/15 (回路図 9/15) (PN-AN)

PN-AN




[Table for LED color-model]

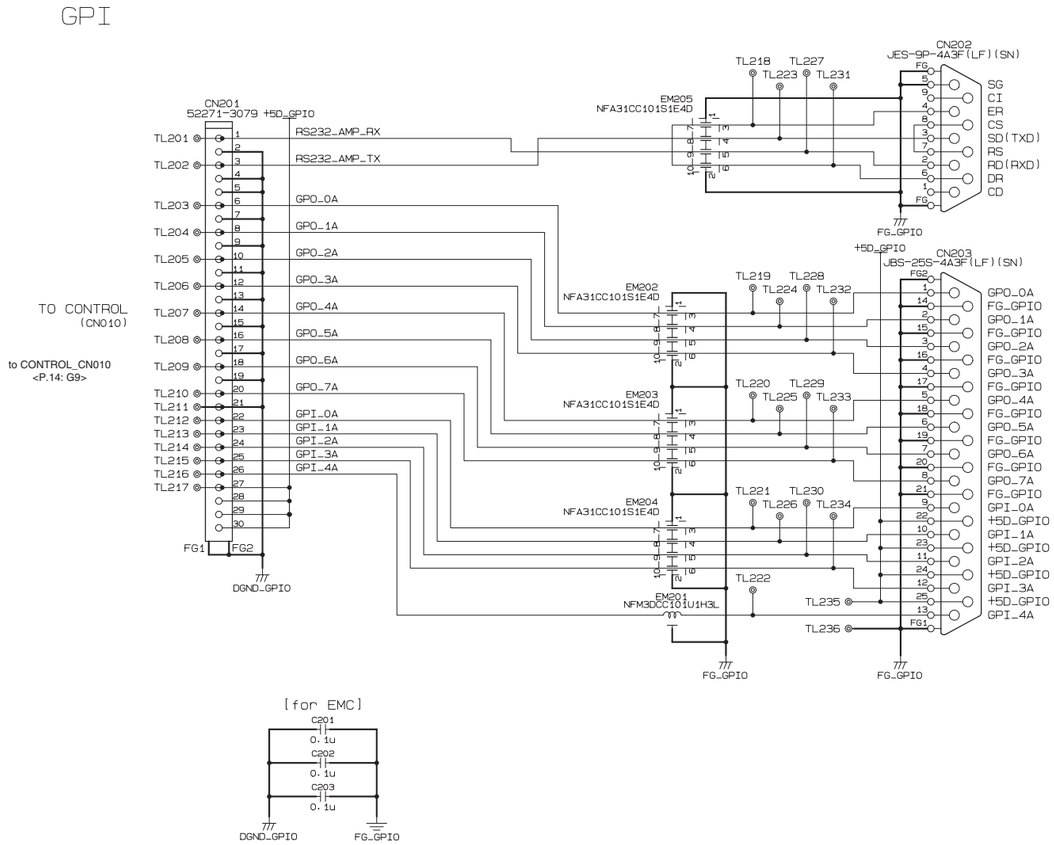
| | |
|---|---|
| Red | SML-512UW |
| Yellow | SML-512WW |
| Yellow-green | SML-512MW |
| Blue | SMLE12BC7T |
| White | SMLE12WBC7W |

**Note:**

Capacitor (no mark):Multilayer Ceramic Chip Capasitor
Resistor (CR):Fixed Thick Film Chip Resistor 3216
Resistor (no mark):Fixed Thick Film Chip Resistor 1608
XX : Not installed (未実装)

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

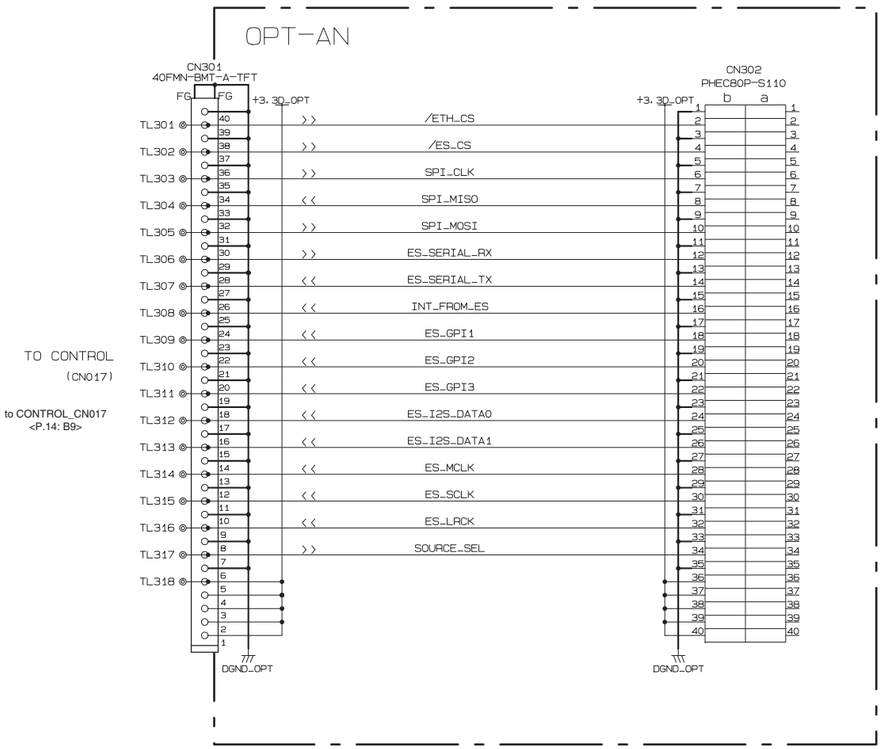
# ■ CIRCUIT DIAGRAM 10/15 (回路図 10/15) (RS232-GPI)

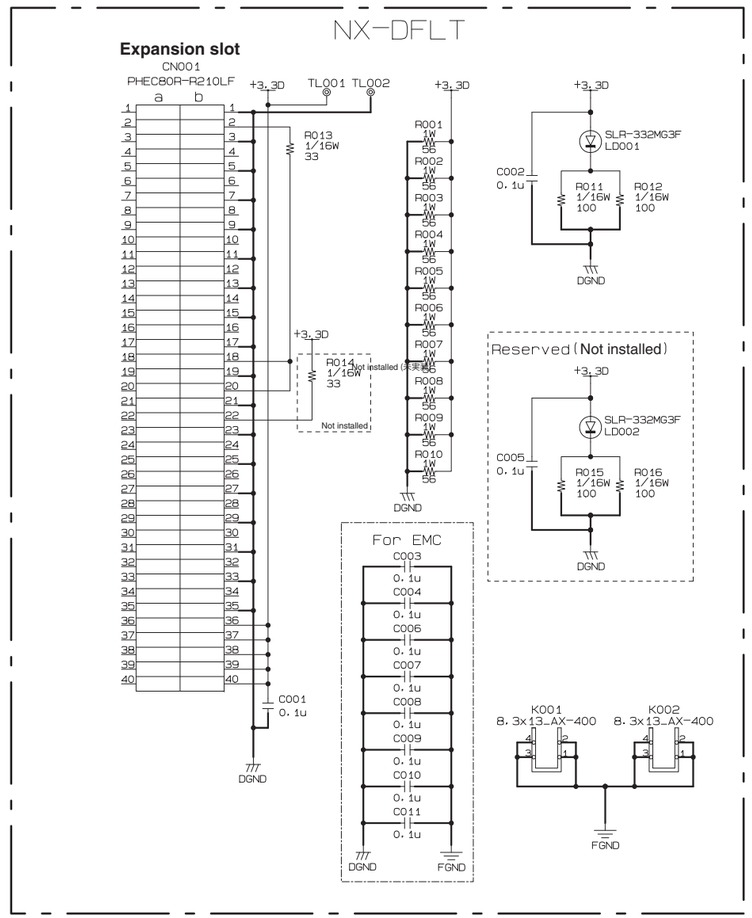



**Note:**
Capacitor (no mark):Multilayer Ceramic Chip Capasitor

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

# ■ CIRCUIT DIAGRAM 11/15 (回路図 11/15) (OPT-AN, NX-DFLT)



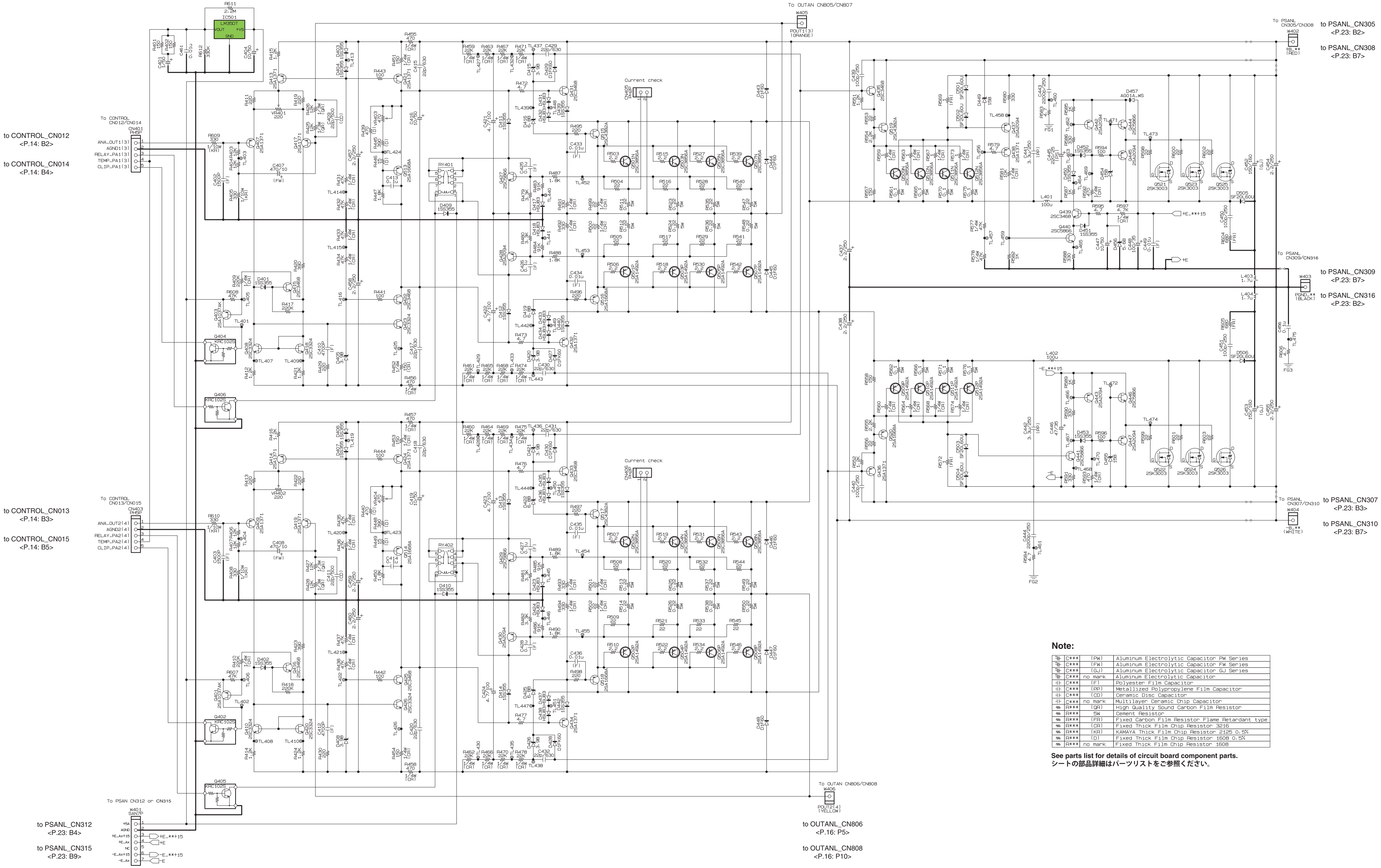

See parts list for details of circuit board component parts.
シートの部品詳細はパーツリストをご参照ください。

28CC1-2001022128-30 ⓪

See parts list for details of circuit board component parts.
シートの部品詳細はパーツリストをご参照ください。

28CC1-2001057627-10 ⓪

# ■ CIRCUIT DIAGRAM 12/15（回路図 12/15）(PAANL)




**Note:**

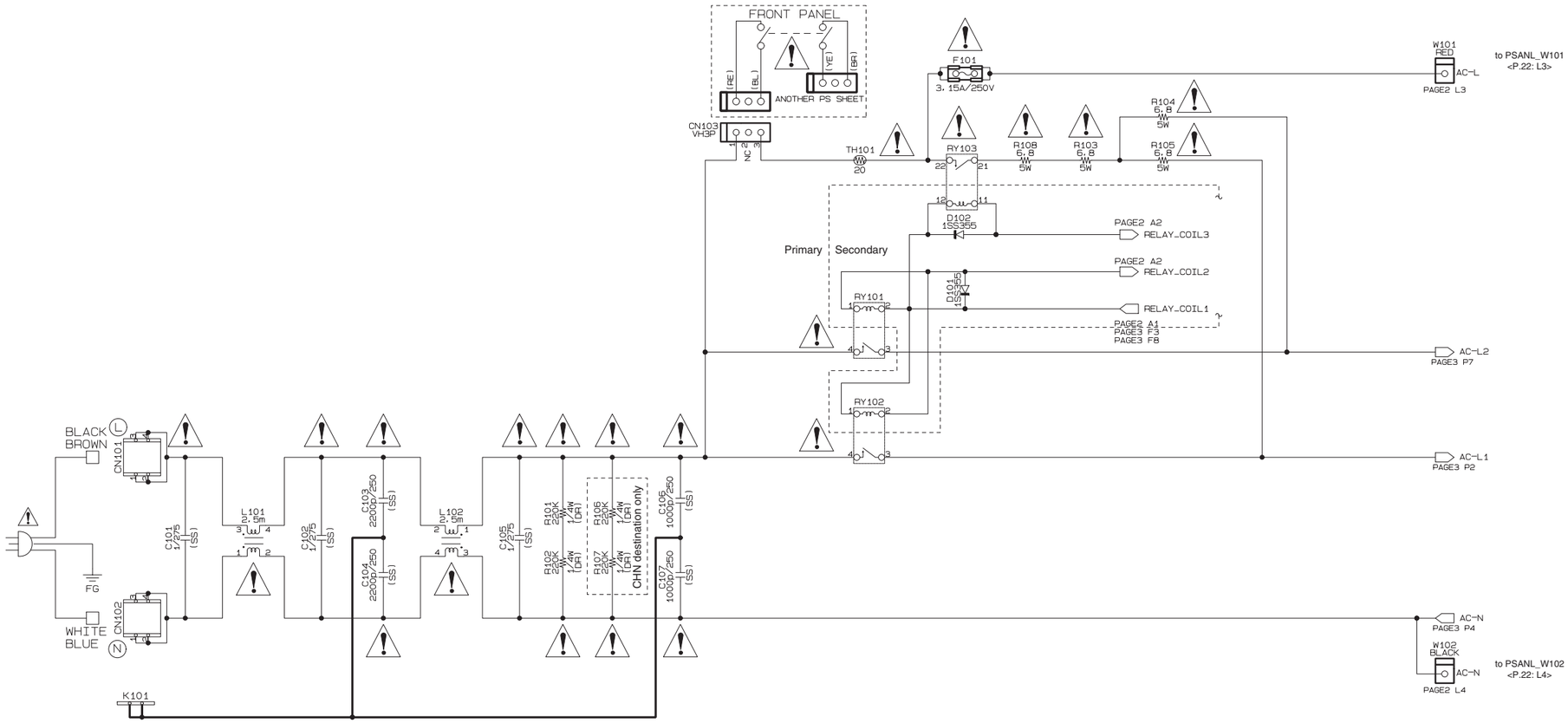
| | | | |
|---|---|---|---|
| ⊥⊤ | C*** | (PW) | Aluminum Electrolytic Capacitor PW Series |
| ⊥⊤ | C*** | (FW) | Aluminum Electrolytic Capacitor FW Series |
| ⊥⊤ | C*** | (GJ) | Aluminum Electrolytic Capacitor GJ Series |
| ⊥⊤ | C*** | no mark | Aluminum Electrolytic Capacitor |
| ⊣⊢ | C*** | (F) | Polyester Film Capacitor |
| ⊣⊢ | C*** | (PP) | Metallized Polypropylene Film Capacitor |
| ⊣⊢ | C*** | (CD) | Ceramic Disc Capacitor |
| ⊣⊢ | C*** | no mark | Multilayer Ceramic Chip Capacitor |
| -W- | R*** | (QR) | High Quality Sound Carbon Film Resistor |
| -W- | R*** | 5W | Cement Resistor |
| -W- | R*** | (FR) | Fixed Carbon Film Resistor Flame Retardant type |
| -W- | R*** | (CR) | Fixed Thick Film Chip Resistor 3216 |
| -W- | R*** | (KR) | KAMAYA Thick Film Chip Resistor 2125 0.5% |
| -W- | R*** | (D) | Fixed Thick Film Chip Resistor 1608 0.5% |
| -W- | R*** | no mark | Fixed Thick Film Chip Resistor 1608 |

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

28CC1-2001022113-10 5

# ■ CIRCUIT DIAGRAM 13/15（回路図 13/15）(PSANL 1/3)

⚠: Important safety parts

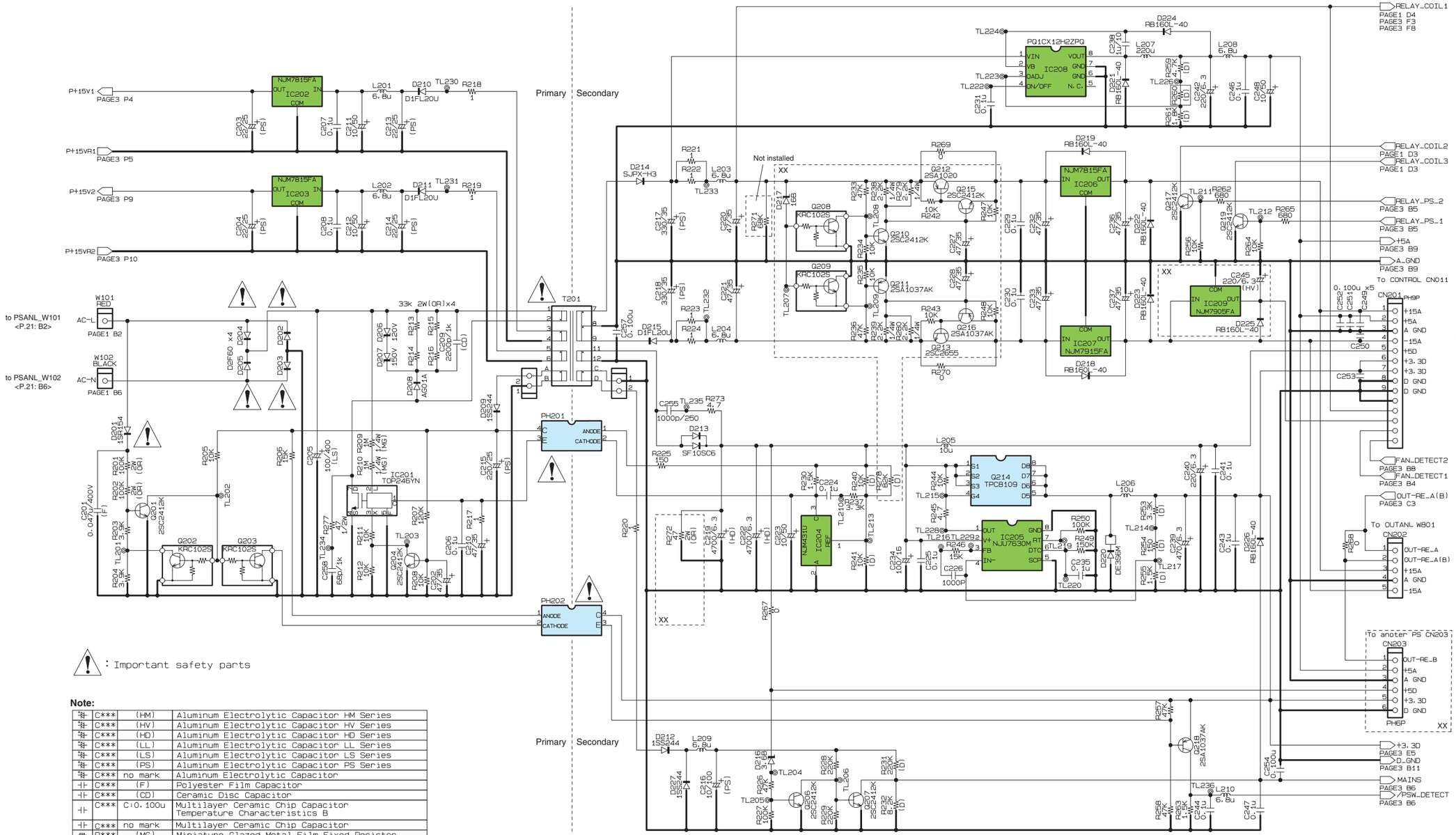



**Note:**

| | |
|---|---|
| (SS) | Safety Standard Recognized Ceramic Capacitor |
| (DR) | Fixed Carbon Film Resistor |
| 5W | Cement Resistor |

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

# ■ CIRCUIT DIAGRAM 14/15 (回路図 14/15) (PSANL 2/3)




: Important safety parts

**Note:**

| | | | |
|---|---|---|---|
| ⏚ | C*** | (HM) | Aluminum Electrolytic Capacitor HM Series |
| ⏚ | C*** | (HV) | Aluminum Electrolytic Capacitor HV Series |
| ⏚ | C*** | (HD) | Aluminum Electrolytic Capacitor HD Series |
| ⏚ | C*** | (LL) | Aluminum Electrolytic Capacitor LL Series |
| ⏚ | C*** | (LS) | Aluminum Electrolytic Capacitor LS Series |
| ⏚ | C*** | (PS) | Aluminum Electrolytic Capacitor PS Series |
| ⏚ | C*** | no mark | Aluminum Electrolytic Capacitor |
| ⊣⊢ | C*** | (F) | Polyester Film Capacitor |
| ⊣⊢ | C*** | (CD) | Ceramic Disc Capacitor |
| ⊣⊢ | C*** | C:0.100u | Multilayer Ceramic Chip Capacitor Temperature Characteristics B |
| ⊣⊢ | C*** | no mark | Multilayer Ceramic Chip Capacitor |
| ⏦ | R*** | (MG) | Miniature Glazed Metal Film Fixed Resistor |
| ⏦ | R*** | (OR) | Fixed Metal Oxide Film Resistor |
| ⏦ | R*** | 5W | Cement Resistor |
| ⏦ | R*** | 1/2W | Fixed Thick Film Chip Resistor 4532 5% |
| ⏦ | R*** | 1/4W | Fixed Thick Film Chip Resistor 3216 5% |
| ⏦ | R*** | (D) | Fixed Thick Film Chip Resistor 1608 0.5% |
| ⏦ | R*** | no mark | Fixed Thick Film Chip Resistor 1608 |

NOTE)

CN201: When the connector of 9 pin is used for CN201, it is used based on the terminal of 1th. The terminals from 10th to 14th are not used by connector of 9 pin.

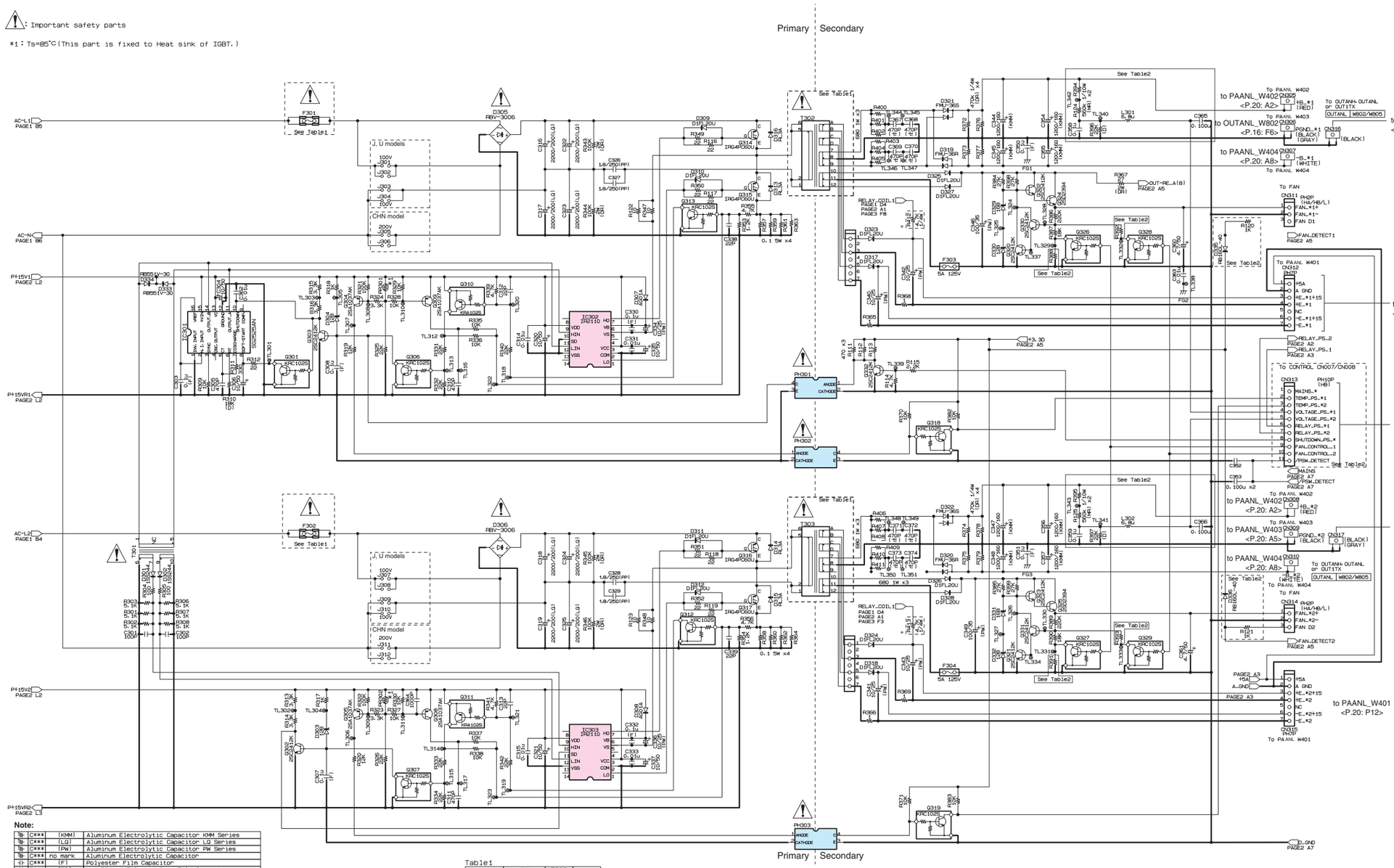
CN202: When the connector of 3 pin is used for CN202, it is used based on the terminal of 3th. The terminals of 1th and 2th are not used by connector of 3 pin.

**See parts list for details of circuit board component parts.**
**シートの部品詳細はパーツリストをご参照ください。**

XX : Not installed (未実装)

28CC1-2001022145-20 4

# ■ CIRCUIT DIAGRAM 15/15 (回路図 15/15) (PSANL 3/3)




Note:

| | | | |
|---|---|---|---|
| ⏚ | C*** | (KMH) | Aluminum Electrolytic Capacitor KMH Series |
| ⏚ | C*** | (LG) | Aluminum Electrolytic Capacitor LG Series |
| ⏚ | C*** | (PW) | Aluminum Electrolytic Capacitor PW Series |
| ⏚ | C*** | no mark | Aluminum Electrolytic Capacitor |
| ⊣⊢ | C*** | (F) | Polyester Film Capacitor |
| ⊣⊢ | C*** | (PP) | Metallized Polypropylene Film Capacitor |
| ⊣⊢ | C*** | C:0.100u | Multilayer Ceramic Chip Capacitor Temperature Characteristics B |
| ⊣⊢ | C*** | no mark | Multilayer Ceramic Chip Capacitor |
| ⏦ | R*** | (OR) | Fixed Metal Oxide Film Resistor |
| ⏦ | R*** | 5W | Cement Resistor |
| ⏦ | R*** | 1/4W | Fixed Thick Film Chip Resistor 3216 5% |
| ⏦ | R*** | (MR) | MATSUSHITA Thick Film Chip Resistor 2125 0.5% |
| ⏦ | R*** | (D) | Fixed Thick Film Chip Resistor 1608 0.5% |
| ⏦ | R*** | no mark | Fixed Thick Film Chip Resistor 1608 |
| ⏦ | R*** | 1W | Fixed Thick Film Chip Resistor 5025 5% |

Table1

| PCB ASSY | F301 F302 | T302 T303 | ±B |
|---|---|---|---|
| J, U | 25A250V | X85549 | ±113V |
| CHN | T10AH250V | X85549 | ±108V |

XX : Not installed (未実装)

NOTE)
CN311 : When the connector of 2 pin is used for CN311 or CN314, it is used based on the terminal of 1th.
CN314 : The terminals of 3th is not used by connector of 2 pin.

CN313 : When the connector of 10 pin is used for CN313, it is used based on the terminal of 1th.
The terminals of 11th is not used by connector of 10 pin.

* WR78430 WIRING ASSEMBLY

**See parts list for details of circuit board component parts.**
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